V00903

ORDER NO. VRD9303M112

Service Manual

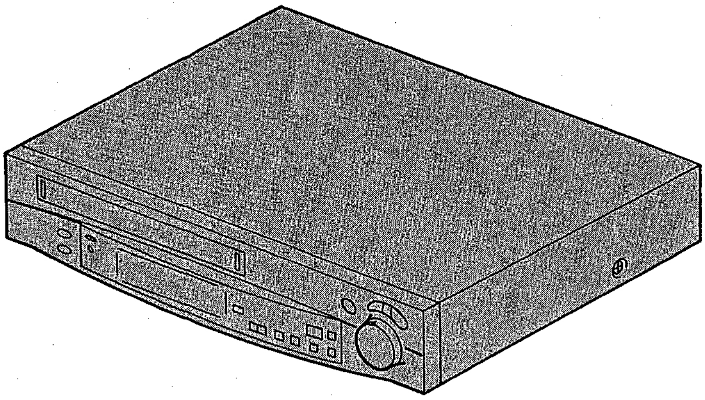
General Description
Adjustment Procedures
Block/Schematic Diagrams
Exploded Views/Parts List

Video Cassette Recorder

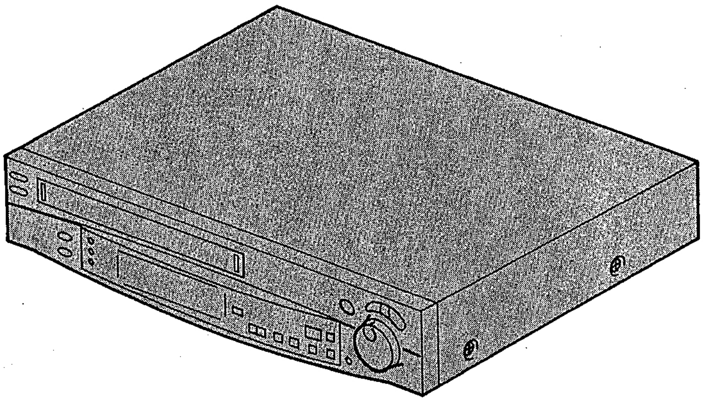
Panasonic VHS PAL HQ

NV-SD30EO EV
NV-SD40EO EV

K-MECHANISM



NV-SD30EO/EV



NV-SD40EO/EV

Panasonic

SPECIFICATIONS (NV-SD30EO/EV)

ITEM	SPECIFICATION
POWER	SOURCE: 220~240V AC 50/60Hz
	CONSUMPTION: 25 watts
RECORDING SYSTEM	2 rotary heads, helical scanning system
	PAL
TV TUNER SYSTEM	VHF I: CHE2~CHS3 VHF III: CHM1~CHE12 VHF H: CHU1~CHS41 (PAL/SECAM B) UHF: CH21~CH69 (PAL/SECAM G) 75Ω unbalanced
RF OUT SYSTEM	UHF: CH36±4 (PAL/SECAM G) 70^{+2}_{-3}dBμ, 75Ω unbalanced
VIDEO	HEADS: 3 rotary heads 1 pair for recording and playback (L-R heads) 1 pc. for trick play (L' heads)
	INPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω unbalanced
	OUTPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω unbalanced

ITEM	SPECIFICATION
AUDIO	HEAD: 1 Stationary head (Normal Audio)
	INPUT: EURO AV Connector (21 pin) More than −6dBV (500mV), 10kΩ
	OUTPUT: EURO AV Connector (21 pin) −6dBV (500mV), Less than 1kΩ
TAPE SPEED	23.39mm/s (PAL) Record/Playback Time: 4 hours with 240min. type tape FF/REW Time: 2.5min. with 180min. type tape
DIMENSIONS	380(W)×89(H)×356(D) mm
WEIGHT	4.6kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Programme Sheet 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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	PAL
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RF OUT SYSTEM	UHF: CH 36±4 (PAL/SECAM G) 70^{+2}_{-3}dBμ, 75Ω unbalanced
VIDEO	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L'-R' heads)
	INPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω unbalanced VIDEO IN Connector (Phono type) 1.0Vp-p, 75Ω unbalanced
	OUTPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω unbalanced

ITEM	SPECIFICATION
AUDIO	HEAD: 1 Stationary head (Normal Audio)
	INPUT: EURO AV Connector (21 pin) More than −6dBV (500mV), 10kΩ AUDIO IN Connector (Phone type) More than −10dBV (316mV), 50kΩ MICROPHONE JACK −70dBV
	OUTPUT: EURO AV Connector (21 pin) −6dBV (500mV), Less than 1kΩ
TAPE SPEED	SP: 23.39mm/s (PAL) 33.35mm/s (NTSC) LP: 11.695mm/s (PAL) 11.12mm/s (NTSC) Record/Playback Time: SP: 4 hours with 240min. type tape LP: 8 hours with 240min. type tape FF/REW Time: 2.5min. with 180min. type tape
DIMENSIONS	380(W)×89(H)×357(D) mm
WEIGHT	4.6kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Programme Sheet 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.
Section 1 presents you with technical know how for actual servicing and general information of features and controls, enabling you to become familiar with each function.
Section 2 presents to your mechanical and electrical adjustment information as well disassembly and replacement procedures.
In the case of very common information relating to other models like mechanical adjustments, please refer to the appropriate service manual.
Section 3, 4 contains block diagrams which provides you with information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c. ...
Section 5 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

(NOTE WHEN USING SERVICE MANUAL FOR NV-SD30/SD40EO)
The NV-SD30/SD40EO are produced in Japan (Video Recorder Division) and in Germany (MB Video GmbH). When confirming the place where they are produced, check the Serial Number Label "Made in Japan" or "Made in Germany" on the rear side.
When using this Service Manual, the parts used depend on the production country. Make sure by refering to the following comparison chart which shows different parts only.

1. Comparison Chart for NV-SD30EO

REF. NO.	PARTS NO. OF JAPAN PRODUCTION	PARTS NO. OF GERMANY PRODUCTION	DESCRIPTIONS
300 (4)	VQT5197	VQT5199	OPERATING INSTRUCTIONS
300 (4)	VQT5200	VQT5201	OPERATING INSTRUCTIONS
323 (4)	VPG6842	VPG6856	PACKING
	VEP03971Q	VEP03971N	MAIN C.B.A.
	VEP03975K	VEP03A01CPE	LUMINANCE & CHROMINANCE PACK C.B.A.
	VEP07726C	VEP07726B	TV DEMODULATOR PACK C.B.A.
	VEP05180B	VEP05182APE	HEAD AMP C.B.A.

2. Comparison Chart for NV-SD40EO

REF. NO.	PARTS NO. OF JAPAN PRODUCTION	PARTS NO. OF GERMANY PRODUCTION	DESCRIPTIONS
300 (4)	VQT5212	VQT5214	OPERATING INSTRUCTIONS
300 (4)	VQT5215	VQT5216	OPERATING INSTRUCTIONS
323 (4)	VPG6845	VPG6862	PACKING
	VEP03971P	VEP03971M	MAIN C.B.A.
	VEP03975J	VEP03A01FPE	LUMINANCE & CHROMINANCE PACK C.B.A.
	VEP07726C	VEP07726B	TV DEMODULATOR PACK C.B.A.
	VEP05180A	VEP05182BPE	HEAD AMP C.B.A.

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SECTION 1
GENERAL DESCRIPTIONS

1-1. SERVICE INFORMATION

1–1–1. K–MECHANISM INFORMATION

A. SERVICE POSITION

When servicing the K–Mechanism, the Mechanism can easily be fixed by standing the Mechanism up in the Main Frame as shown below to check easily.
In this position, the following services are possible.

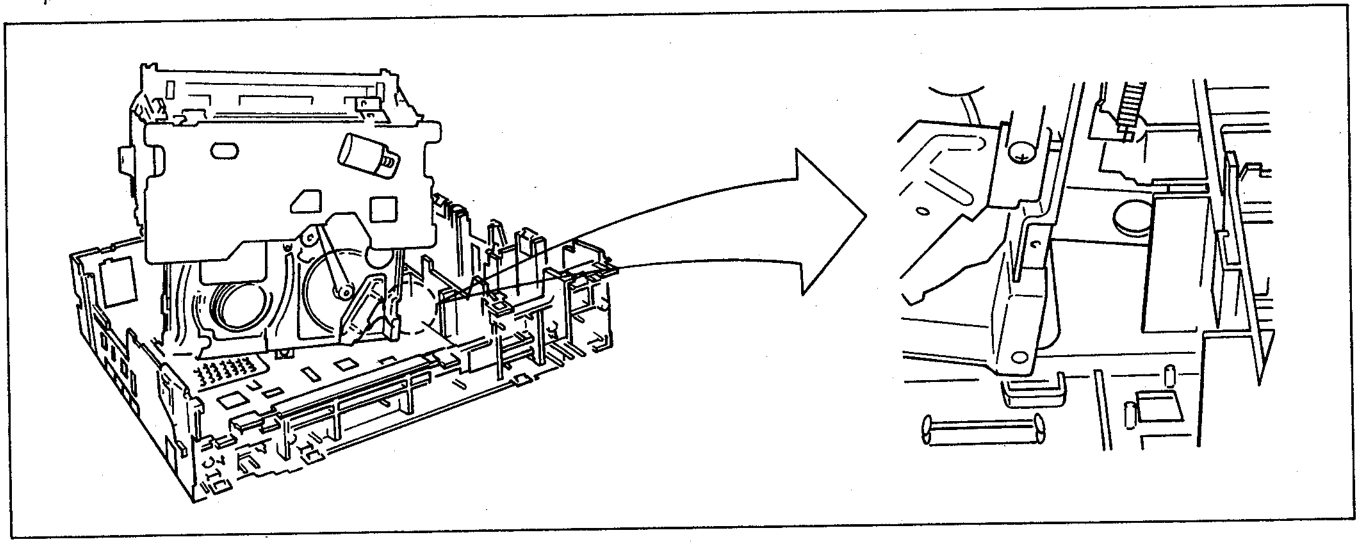


Fig. S1

A–1. CHECKING OF GEAR PHASE ALIGNMENT CONDITION

1) Remove the Mechanism Connection C.B.A.
2) Check gear phase visually.
   (Refer to the Phase Alignment Condition of Mechanism described on the left side of Frame.)

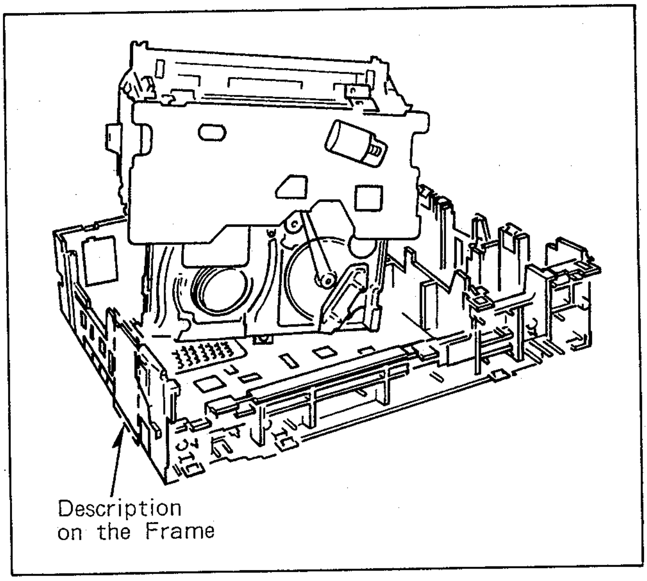


Fig. S2

A–2. Checking of Loading / Unloading Operation.

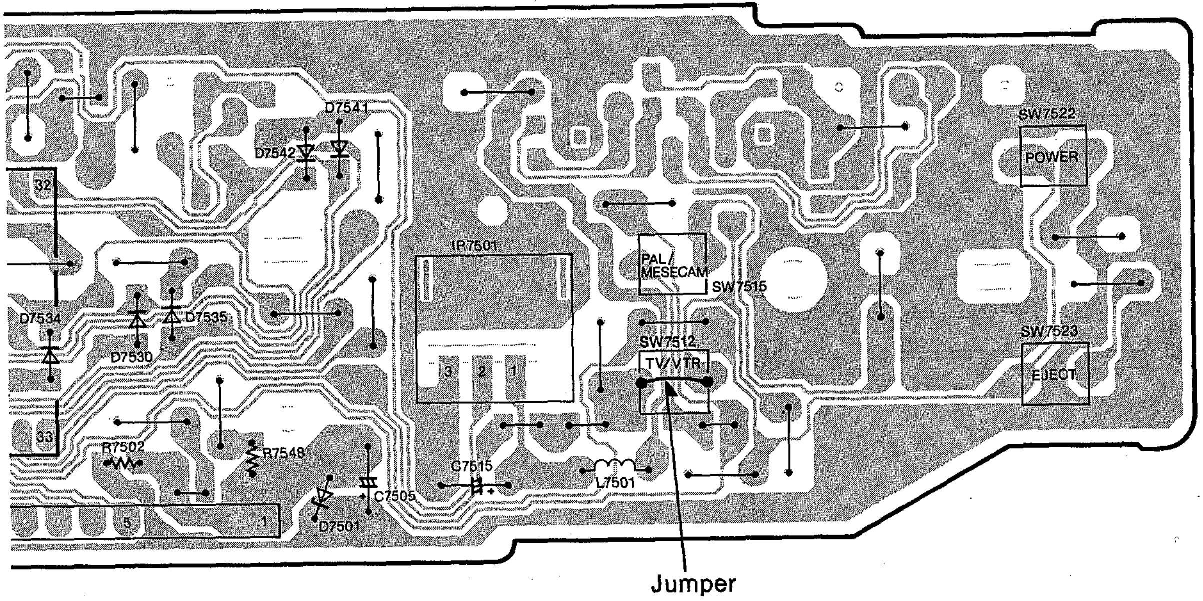
There are 3 methods for manual operation of loading/unloading operation as follows.

1. HAND OPERATION
   1) Remove the Mechanism Connection C.B.A.
   2) Turn the Worm Gear or the WORM WHEEL GEAR (Remove the Loading Motor Unit) manually.

2. BATTERY OPERATION
   1) Remove the Mechanism Connection C.B.A.
   2) Connect the Battery or Power Supply (+6V) to the Loading Motor terminals.

3. SERVICE INFORMATION DISPLAY OPERATION
   1) Set the Service Information Display mode. (Press the "EJECT" button while turning the "SHUTTLE RING" clockwise.)
   2) Momentarily make a short circuit by inserting tweezers into the two holes at TV/VTR SW(SW12) LOCATED on the Timer C.B.A. (The end of display on the Display becomes "––".)
   3) In the above condition, The Loading Motor rotates for Loading operation by pressing the "PLAY" button. The Loading Motor rotates for unloading operation by pressing the "STOP" button.

TIMER C.B.A. (NV-SD30)


D7541
D7542
32
IR7501
PAL/MESECAM
SW7515
SW7522
POWER
D7534
D7535
D7530
SW7512
TV/VTR
SW7523
EJECT
3 2 1
33
R7502
R7548
C7515
L7501
C7505
D7501
5
1
Jumper

TIMER C.B.A. (NV-SD40)

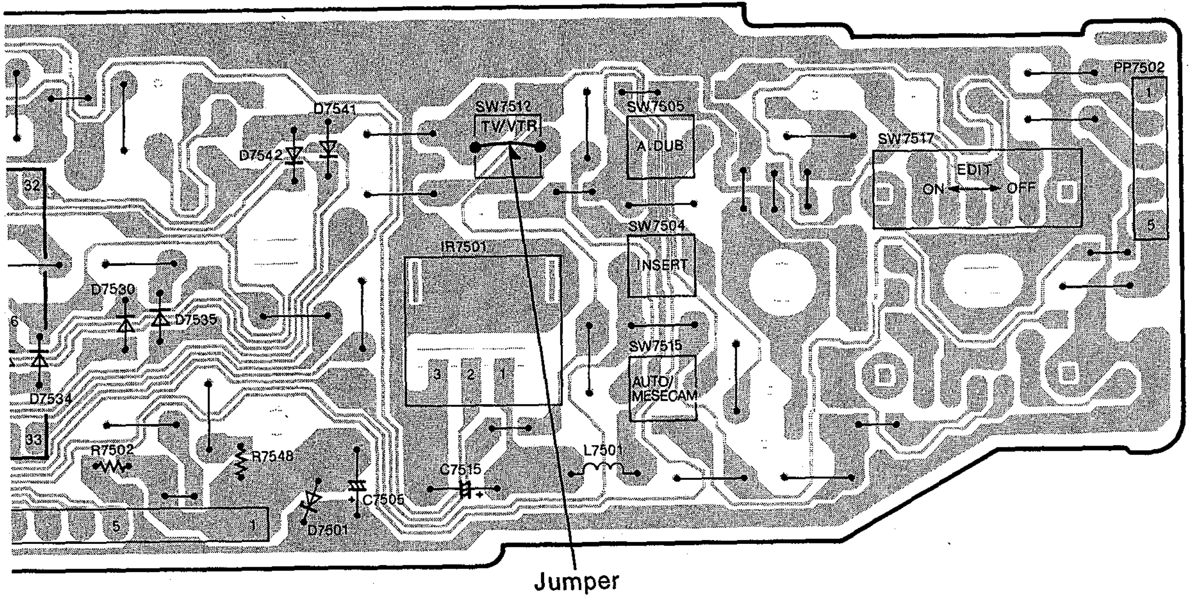

PP7502
1
D7541
SW7512
TV/VTR
SW7505
A.DUB
SW7517
EDIT
ON
OFF
D7542
32
SW7504
INSERT
5
IR7501
D7530
D7535
6
SW7515
AUTO/MESECAM
3 2 1
D7534
33
R7502
R7548
L7501
C7515
C7505
D7501
5
1
Jumper

Fig. S3

Remark:
After checking, check the "SERVICE DISPLAY INFORMATION" mode for final confirmation of movement of Mechanism.

A–3. Checking of operation of Reel Gears.

1) Remove the Mechanism Connection C.B.A.
2) Set mechanism to "PLAY" position by manual operation of loading.
3) Turn the "Rotor Unit" to check movement of reel gears.

B. REPLACEMENT OF CYLINDER UNIT

The Cylinder Unit can be replaced easily by the following method.

1) Remove the Top Panel.
2) Remove the 3 screws of the Cylinder Unit with a magnetized screw driver through the holes on the Bottom Plate as shown in Fig.S4.

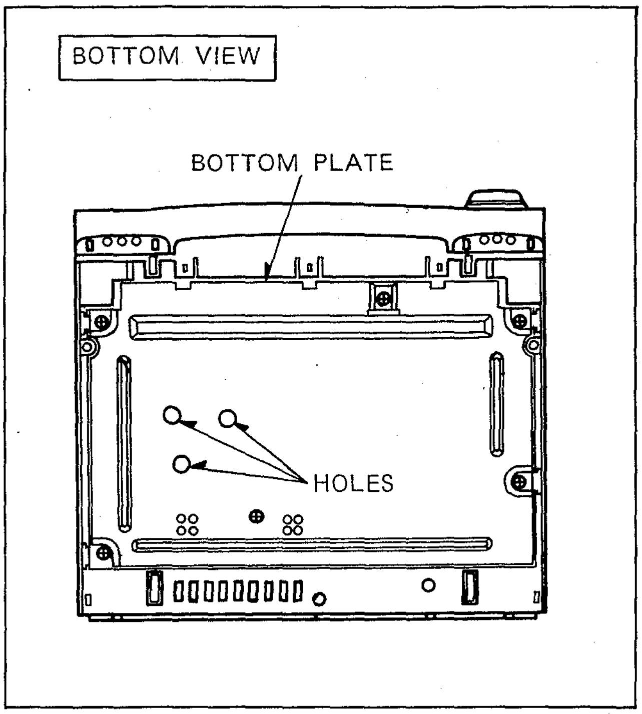

BOTTOM VIEW
BOTTOM PLATE
HOLES

Fig. S4

C. ASSEMBLY OF CAPSTAN STATOR UNIT

When replacing the CAPSTAN STATOR UNIT, the CENTRE FIXING TOOL (VFK0851) must be used to fix the centre of CAPSTAN STATOR UNIT.

Method:

1) Place the CAPSTAN STATOR UNIT into position.
2) Loosely tighten the 3 screws.
3) Insert the CENTRE FIXING TOOL (VFK0851) as shown in Fig.S5.
4) Tighten the 3 screws.
5) Remove the CENTRE FIXING TOOL.

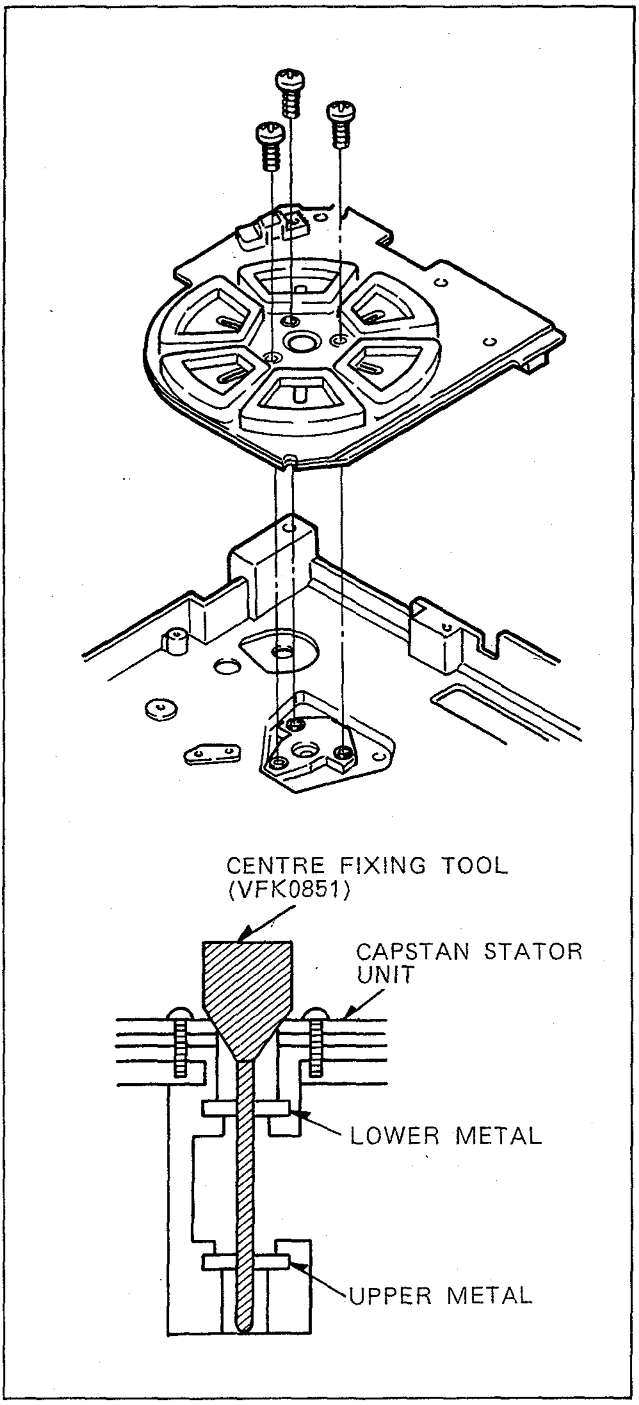

CENTRE FIXING TOOL
(VFK0851)
CAPSTAN STATOR UNIT
LOWER METAL
UPPER METAL

Fig. S5

D. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>
If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear and will not rotate.
For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate the carriage connection gear by hand in the direction of the arrow.

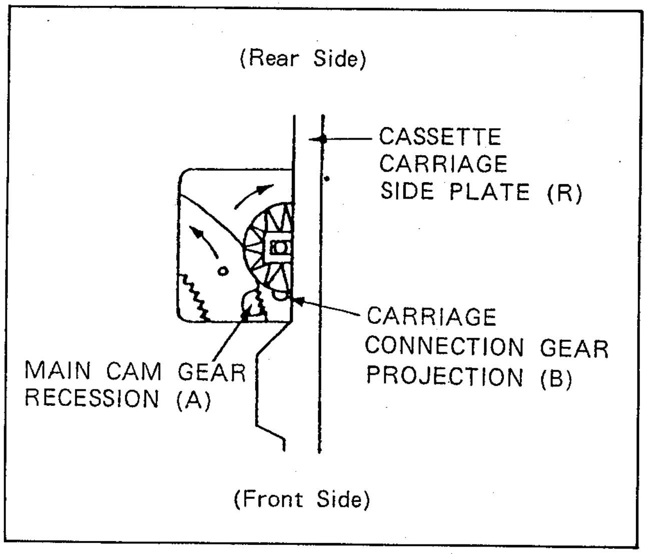

(Rear Side)
CASSETTE CARRIAGE SIDE PLATE (R)
CARRIAGE CONNECTION GEAR PROJECTION (B)
MAIN CAM GEAR RECESSION (A)
(Front Side)

Fig. S6 Top View of Eject Operation

E. TAKE–UP PHOTO SENSOR OPERATION

Note the following matters for Take–up Photo Sensor Operation.

1) While servicing of the K–Mechanism, the unit will not operate properly if a strong light (ex, Fluorescent light, Spot light) falls on the Take–up Photo Sensor.
   In this case, cover the Take–up Photo Sensor to prevent the light from falling on it.
2) While servicing of the K–Mechanism with "Power On" and without cassette tape inserted, the Unit does not operate properly.

F. SERVICING OF POWER TR. C.B.A.

When removing the connector on the Power Tr. C.B.A., hold the P. C. Board by hand to prevent damage of the Power Tr.

1–1–2. REMOVAL OF THE CASSETTE TAPE.

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to remove the cassette manually. There are 2 methods of removing the cassette.

1. HAND OPERATION

1) Remove the bottom plate.
2) Turn the WORM GEAR to "A" arrow mark direction manually as shown in Fig.S7, moving the LOADING POST to the unloaded position.
3) Turn the CAPSTAN clockwise to take up the tape.
4) Turn the WORM GEAR again to eject the cassette.

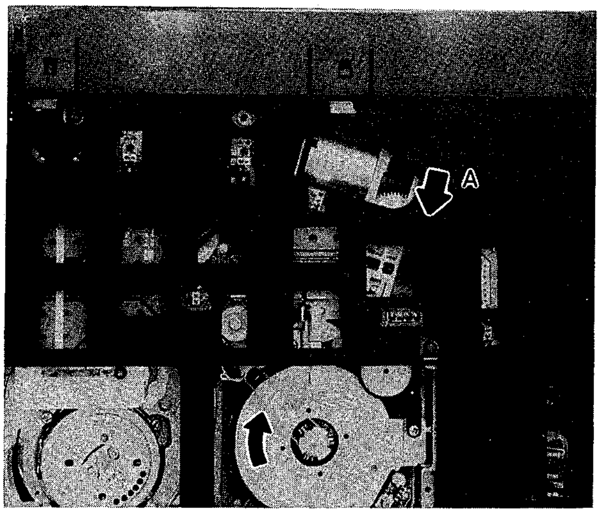


Fig. S7

2. BATTERY OPERATION

1) Connect the battery to P1503 as shown in Fig.S8.
2) After moving the LOADING POST to the unloaded position, disconnect the battery to stop the motor.
3) Turn the CAPSTAN to clockwise to take up the tape.
4) Reconnect the battery to eject the cassette.

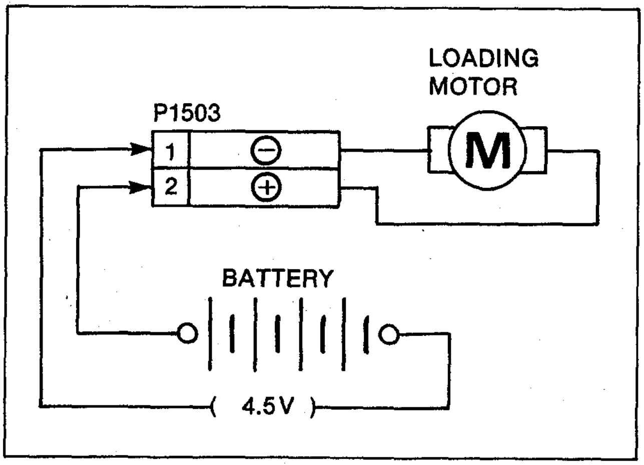

LOADING MOTOR
P1503
1
2
⊖
⊕
M
BATTERY
4.5V

Fig. S8

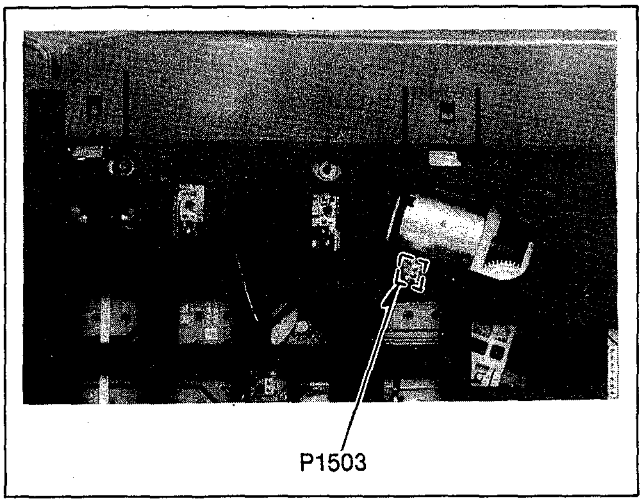


Fig. S9

1-1-3. INSTALLATION OF FLAT CARD CABLE

When installing of the Flat Card Cable to the connector, make sure the direction of the Flat Card Cable. The Insulation Sheet side is backside.

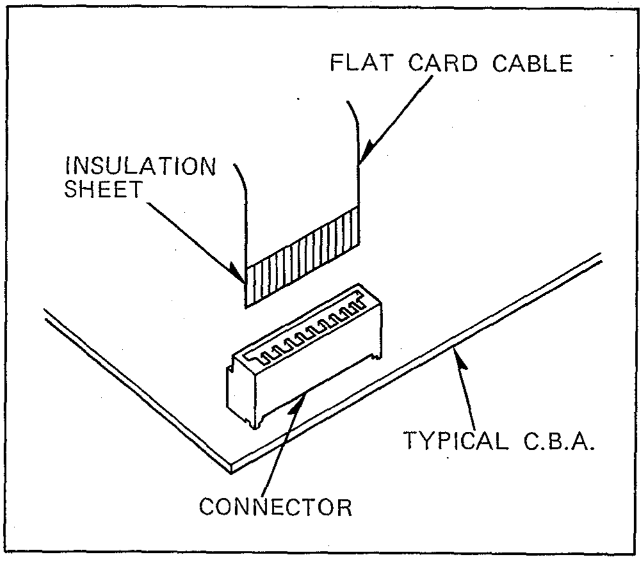

FLAT CARD CABLE
INSULATION SHEET
TYPICAL C.B.A.
CONNECTOR

Fig. S10

1-1-4. SERVICING OF LUMINANCE & CHROMINANCE PACK C.B.A.

When servicing of the Luminance & Chrominance Pack C.B.A., set to the following condition for easy servicing.

1) Remove the Input/Output Pack C.B.A.
2) Remove the TV Demodulator Pack C.B.A.
3) Install the Input/Output Pack C.B.A.

NOTE:
For checking of Recording operation and playback signal, use the AV 21 Pin Terminal on rear panel.

1-1-5. INITIALIZATION OF CHANNEL MEMORY IC (IC7504/M6M80021P)

When replacing the channel memory IC (IC7504/M6M80021P), the memory IC should be initialized to keep formal specification.)

Note:

1) It should be performed before tuning.
2) During initialization or after initialization within 1 second, do not stop the power source. (Do not disconnect AC cord.)
3) Meaning of "INITIALIZATION" is to erase the "SKIP CH" In other words the number of channel position is the same as displayed channel.

Method:

1) Press the CH UP/DOWN Button so that the Channel indicator indicates "3".
2) Connect a jumper wire between Pin 54 and Pin 35 of IC7501 for more than 1 second.
3) Channel indication changes from "3" to "1".

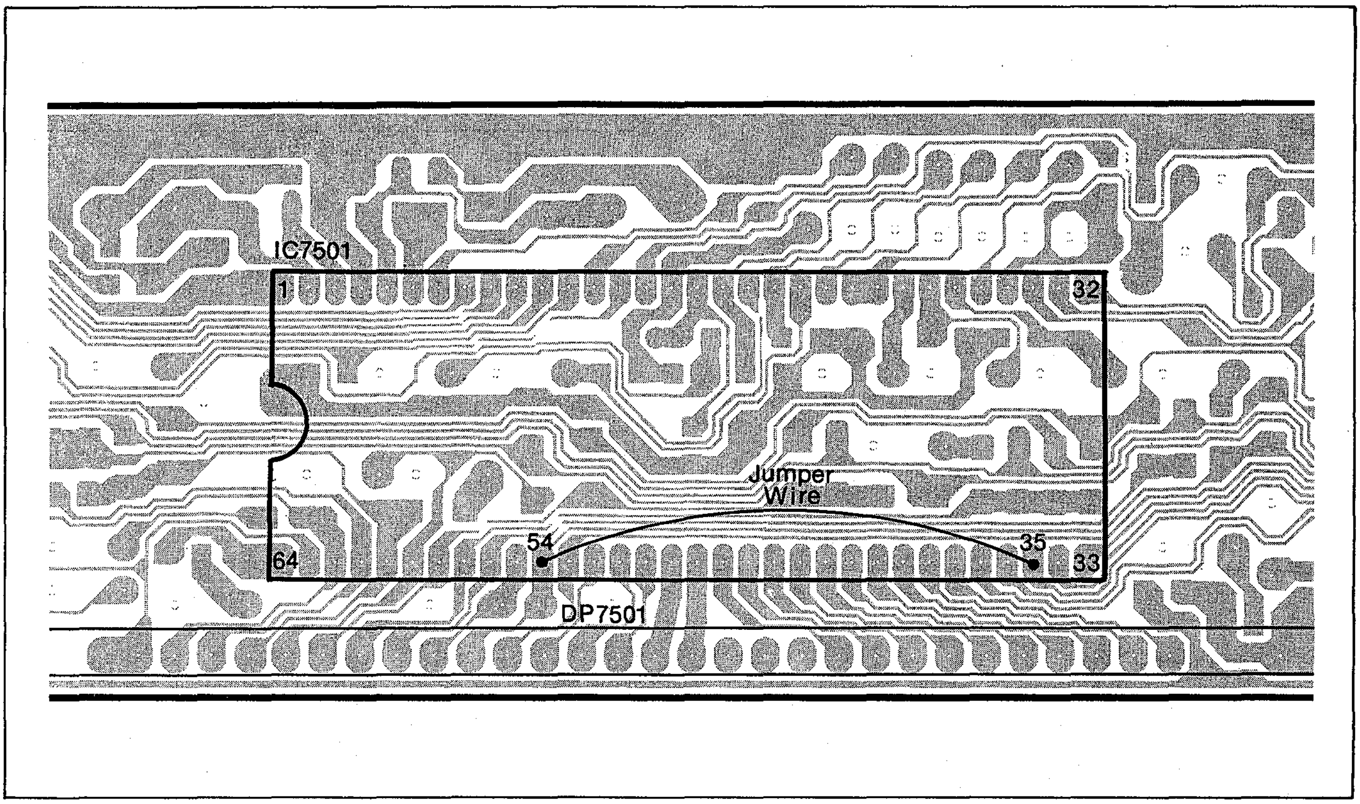


Fig. S11

1-1-6. HOW TO CHECK THE CRACKED CHIP PART

(1) Apply heat to the soldered portions of chip part using a soldering iron for about 2-3 seconds.
(2) If the chip part is faulty, it will fracture.

Caution:
Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

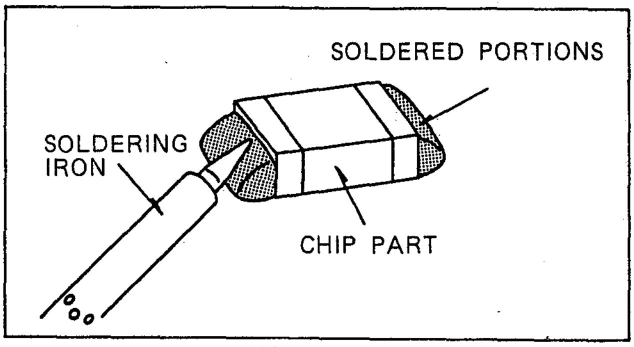

SOLDERED PORTIONS
SOLDERING IRON
CHIP PART

Fig. S12

Note:
Regarding intermittent faults.
The main causes of these faults are poor soldering and cracked chip parts.

1-1-7. HOW TO REPLACE THE CHIP PART

1)REMOVAL (RESISTOR, CAPACITOR, etc...)

(1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.
(2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

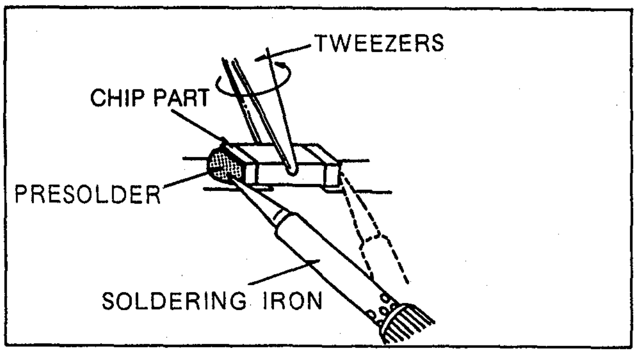

TWEEZERS
CHIP PART
PRESOLDER
SOLDERING IRON

Fig. S13

2) REMOVAL (transistor, diode, etc...)

(1) Grasp the chip part with tweezers and melt the solder of one lead.

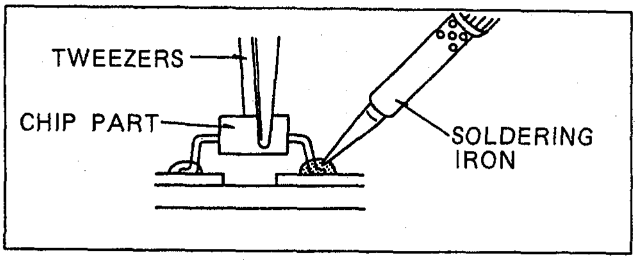

TWEEZERS
CHIP PART
SOLDERING IRON

Fig. S14

(2) Lift the side of that lead upward.

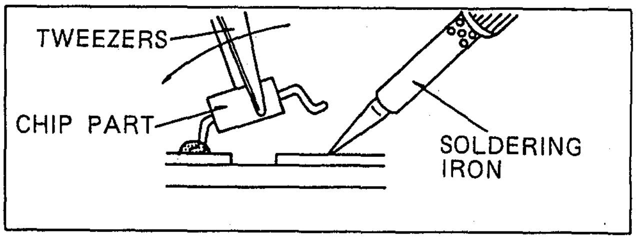

TWEEZERS
CHIP PART
SOLDERING IRON

Fig. S15

Caution:
Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

(3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

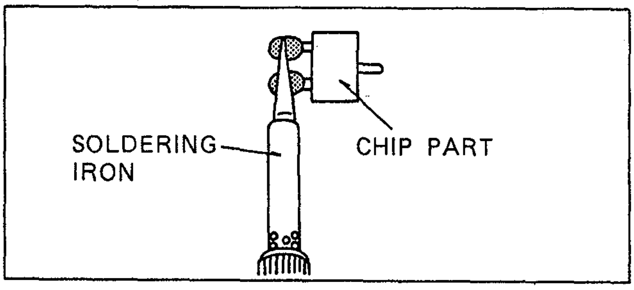

SOLDERING IRON
CHIP PART

Fig. S16

3) INSTALLATION

(1) Presolder the one side of contact point on the circuit board.

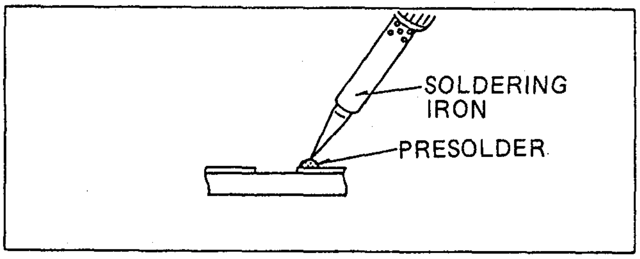

SOLDERING IRON
PRESOLDER

Fig. S17

(2) To install the chip part, hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
(3) Solder the other side of the chip part.
(4) Check your soldering and ensure no short circuits between pins.

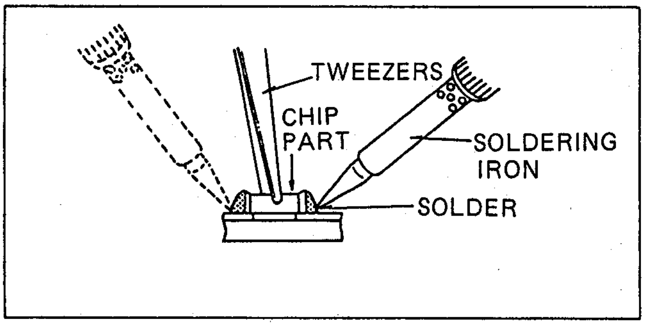

TWEEZERS
CHIP PART
SOLDERING IRON
SOLDER

Fig. S18

1-1-8. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

(FOR EXAMPLE)

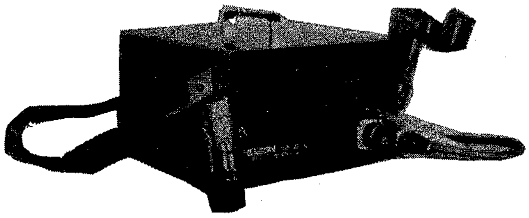


Fig. S19

(1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5-8 seconds.
(2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution:
Do not supply the hot air to the chip parts around the Flat-IC for long time as damage may occur to the chip parts around the Flat-IC.

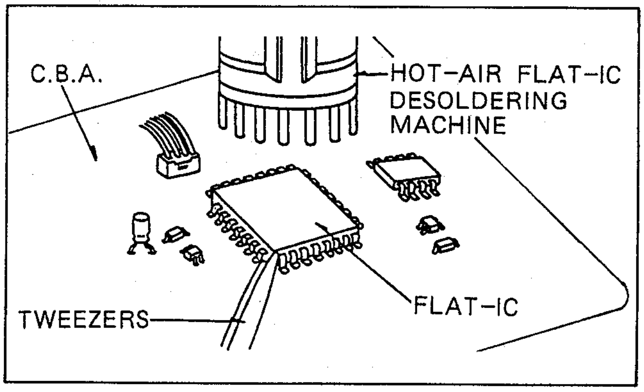

C.B.A.
HOT-AIR FLAT-IC DESOLDERING MACHINE
TWEEZERS
FLAT-IC

Fig. S20

(WITH SOLDERING IRON)

(1) Using solder braid remove the solder from all pins of the Flat-IC.
When you use the solder flux which is applied to all pins of the Flat-IC, you can remove it easily.

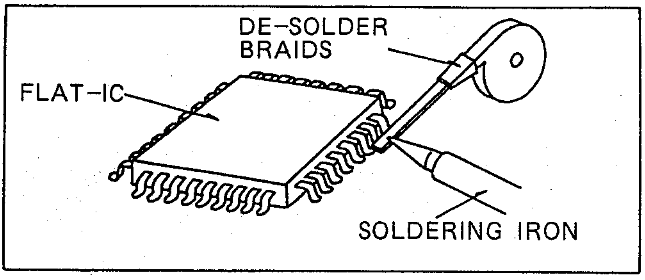

DE-SOLDER BRAIDS
FLAT-IC
SOLDERING IRON

Fig. S21

(2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire(iron wire), while heating the pins using a fine tip soldering iron or a hot air blower.

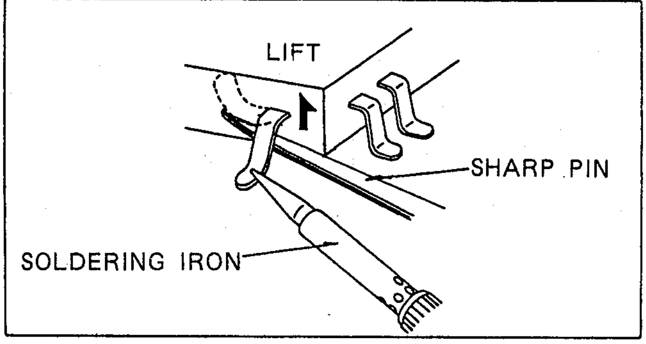

LIFT
SHARP PIN
SOLDERING IRON

Fig. S22

(WITH IRON WIRE)

(1) Affix the wire to workbench or solid mounting point as shown in Fig.S23.
(2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad, while heating the pins using a fine tip soldering iron or hot air blower.

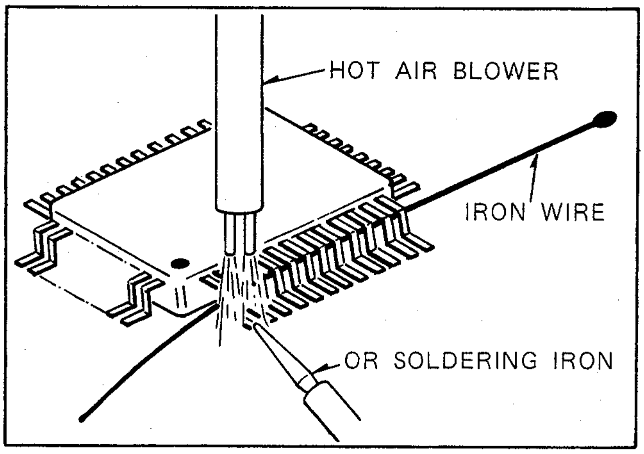

HOT AIR BLOWER
IRON WIRE
OR SOLDERING IRON

Fig. S23

Note:
When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

1-2. SERIAL DATA/CLOCK TRANSMISSION ERROR DISPLAY

If the Serial Data/Clock is not transmitted from IC6001 to IC7501, "E9" is displayed as shown in Fig.T1. This indication will be displayed either during the Service Information Display mode or in normal mode.

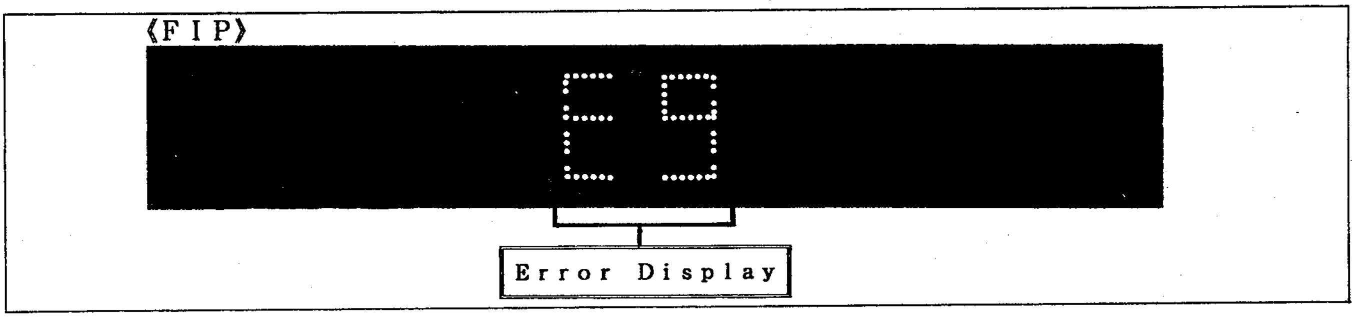

《F I P》
E9
Error Display

Fig. T1 Serial Data/Clock Transmission Error Display

1-3. SERVICE INFORMATION DISPLAY

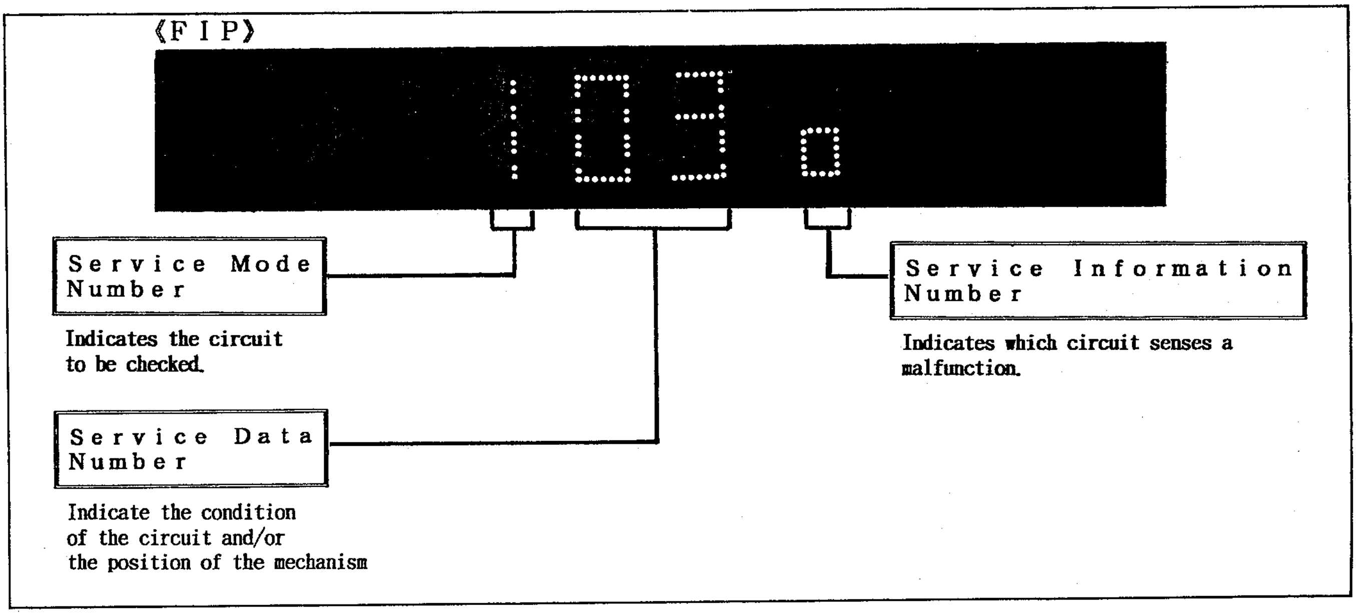

《F I P》
103 0
Service Mode Number
Indicates the circuit to be checked.
Service Data Number
Indicate the condition of the circuit and/or the position of the mechanism
Service Information Number
Indicates which circuit senses a malfunction.

Fig. D1 Service Information Display

1-3-1. Purpose of Service Information Display

This information aids trouble shooting by indicating the source of the malfunction. The service mode number & service data number are used by the technician during repair while the service information can be used by the consumer to diagnose malfunctions allowing the technician to provide a more accurate repair cost estimate and reduce repair time.

1-3-2. Turning on Service Information Display

There are two ways to turn on the Service Information Display.

(1) Turn the Shuttle Ring to FF then push the Eject button. The Service Information will be displayed for 1 minute.
(2) Connecting a jumper wire between TPSERV and TPGND will display the service information indefinitely.

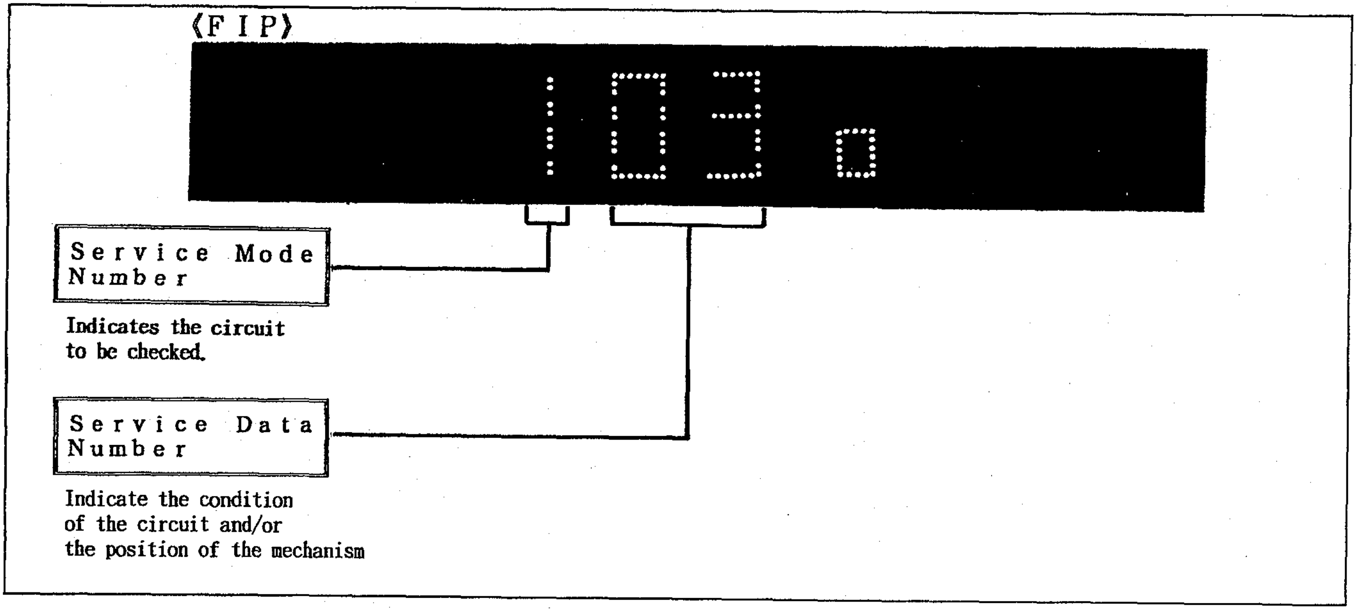
In the Service Information Display, there are four digits divided into 3 functions.
The first digit indicates which other 6 service modes that the unit is Currently in.

MODE 1 : Check tape protection circuit
MODE 2 : Check tape transport mechanism
MODE 3 : Check mode switching operation
MODE 4 : Check control buttons
MODE 5 : Check capstan motor
MODE 6 : Check cylinder motor

The second and third digits are service data which indicate the condition of the circuit or mechanism being checked.

The fourth digit is the service Information display. It is to be used by the consumer to help determine the source of a malfunction. The service information display operates independently of the service modes and stores the fault indication in memory for as long as AC power is supplied.

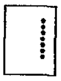
1-3-3. Use of Service Modes



⟨F I P⟩
Service Mode Number
Indicates the circuit to be checked.
Service Data Number
Indicate the condition of the circuit and/or the position of the mechanism

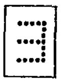
Fig. D2 Service Mode Number and Service Data Number on S.I.D.

(1) Turn on Service Information Display.
(2) To change Service Modes turn the shuttle ring to FF then push the Eject button.
(3) Mode 1 : Checks that the Sensor LED, Supply & Take-up Sensor circuits check the circuits by blocking the light from the Sensor LED to either or both Supply & Take-up Sensors.
When the light is blocked to both sensors, "00" should be indicated on the service data number.
When the light is blocked to the supply sensor, "01" should be indicated.

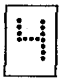


(4) Mode 2 : Checks the mode switch circuit while indicating mechanism position.
Service Data Numbers indicate the position of the mode switch and there by the mechanism position.

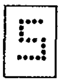
(5) Mode 3 : Checks that mode switch circuit operations have been completed.
Service Data Number should indicate "00" after each mechanism operation is completed.



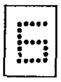
(6) Mode 4 : Checks the operation circuit.
Indicates if IC6001 receives the operating commands from the mode buttons and/or remote controller.



(7) Mode 5 : Checks the capstan motor circuit.
Indicates if the IC6001 has received the command to rotate the capstan motor.



(8) Mode 6 : Checks the cylinder motor circuit.
IC6001 has received the command to rotate the cylinder motor.



<NOTE>
Refer to Fig.D5 for details of Service Data Number.

1-3-4. Service Information Number

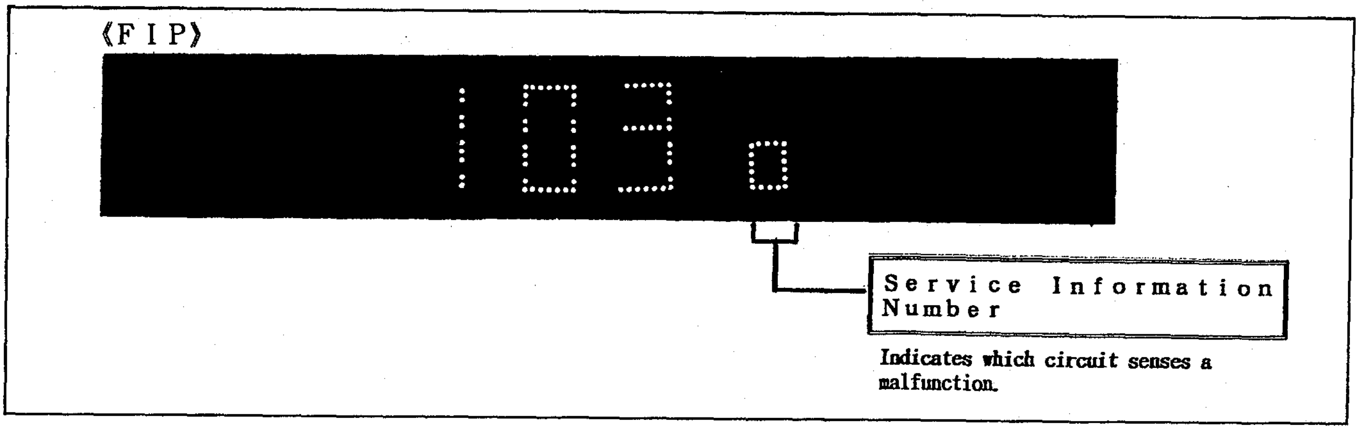

《F I P》
1 0 3 0
Service Information Number
Indicates which circuit senses a malfunction.

Fig. D3 Service Information Number on S.I.D.

Refer to Fig.D4 for details of Service Information Number.

Note:
The Service Information Number display is independent of the service mode display.
The Service Information Number will be stored as long as AC power is supplied.
If a second error occurs, the most current error will be displayed.

Service Information Number	Malfunction
0	Normal (No problem)
1	Cylinder stop
2	Tape reel stop
3	Stop at position other than 4 or 6
4	Stop during unloading
5	Falty capstan rotation
6	Stop during Cassette-In/Eject operation

Fig. D4 Service Information

Service mode Number	Note for checking Service Data Numbers	Service Data Numbers	Indication	Remarks
1		00	No light detected at either sensor	Tape not required
		01	Tape Begining. Light to Supply Photo Sensor is blocked.	
		02	Tape End. Light to Take-up Photo Sensor is blocked.	
		03	Light detected at both sensors.	
2		00	EJECT	Tape Reuired *1 : STOP3 ; The Pinch Roller is on the capstan motor shaft. *2 : STOP ; The Pinch Roller is off the capstan motor shaft. Refer to Fig. D7 to Check mechanism Position and timing.
		01	Cassette-down	
		02	REV, REV SLOW	
		03	Loading/Unloading	
		04	PLAY/REC, STILL/PAUSE, CUE, FWD SLOW, STOP3 *1	
		05	STOP*2	
		06	FF/REW	
		07	Intermediate position	
3	Disregard service data displayed until mechanism operation is completed. Then the display should indicate "00".	00	Any display other than "00" indicates a fault in the mode switch circuit or system.	Tape Required.
4	Display only when the operating button is pressed.	Refer to Fig. D6		Tape not required.
5	Left digit only, disregard Right digit display.	81 Left Digit Right Digit	8, 9, u, A, −, n, L, and no display indicate that the Capstan motor "PLAY" command recived by IC6001.	Tape required. If a symbol other than those listed is displayed, a malfunction in that circuit is indicated.
	Right digit only, disregard left digit display.	87 Left Digit Right Digit	1, 2, 3, 4, 5, 6, 7, indicate that the Capstan motor CUE, FF, Forward slow" commands received by IC6001.	
	Right digit only, disregard left digit display.	8 Left Digit Right Digit	8, 9, u, A, −, n, L, and no display indicate that the Capstan motor Reverse, Rew, Reverse Slow commands received by IC6001.	
6	Left digit only, disregard Right digit display.	10 Left Digit Right Digit	1, 3, 5, 7, 9, A, n and no display indicate that the cylinder motor "ON" command received by IC6001.	Tape required. If a symbol other than those listed is displayed, a malfunction in that circuit is indicated.

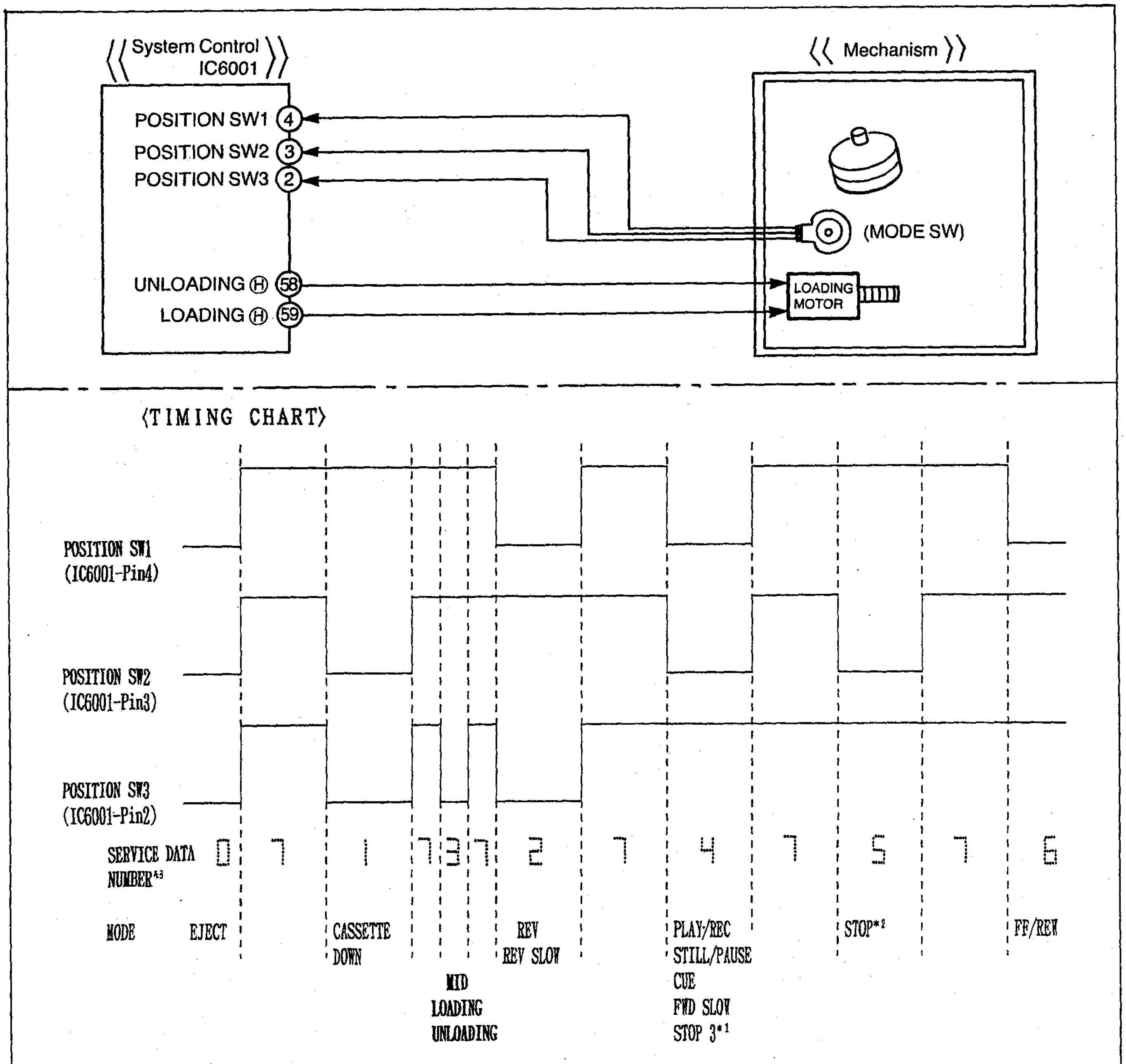
Fig. D5 Service Data Display and Indication

SERVICE DATA NUMBERS	MODE BUTTONS	SERVICE DATA NUMBERS	MODE BUTTONS
3n	OPERATE	54	RESET
01	EJECT	5	ZERO STOP
09	AUDIO DUB	-0	INPUT SELECT
A3	INSERT	49,4U	INDEX
-9	PAL/MESECAM	A1,A2	TRACKING(+,-)/V-LOCK
—	CHECK/PROG.	9	REPEAT
34 OR 35	∧∨, +−	8	SKIP
—	NEXT/SP/LP	—	TAPE SELECT
—	SLEEP/SHIFT	—	PROG.
A4	TIMER REC	—	NEXT
08	REC	—	RECORDING SP/LP
—	CLOCK SET	—	CANCEL
—	TUNER PRESET	10	SU(1)
80	PAUSE/STILL	11	MO(2)
0U	PLAY	12	TU(3)
00	STOP	13	WE(4)
0-,0n	JOG DIAL (FRAME ADV, REVERSE ADV)	14	TH(5)
03,02	SHUTTLE RING (FF, REW)	15	FR(6)
—	TV/VTR	16	SA(7)
—	SCANNER ON/OFF	17	SU~SA(8)
—	TRANSMIT	18	MO~SA(9)
0	SEARCH	19	MO~FR(0)
8L	+ (REMOTE CONTROLLER)	3A	-/--
8	- (REMOTE CONTROLLER)		
—	DISPLAY		

Fig. D6 Service Data Display for Service mode 4

1-3-5. Timing Chart from Mode SW to System control IC6001

System control IC6001 senses the mechanism position though the Mode SW.
Fig.D7 shows the timing for Service Mode Number 2.


System Control IC6001
Mechanism
POSITION SW1 ④
POSITION SW2 ③
POSITION SW3 ②
UNLOADING Ⓗ (58)
LOADING Ⓗ (59)
(MODE SW)
LOADING MOTOR
〈TIMING CHART〉
POSITION SW1 (IC6001-Pin4)
POSITION SW2 (IC6001-Pin3)
POSITION SW3 (IC6001-Pin2)
SERVICE DATA NUMBER*3
0 7 1 7 3 7 2 7 4 7 5 7 6
MODE
EJECT
CASSETTE DOWN
MID LOADING UNLOADING
REV REV SLOW
PLAY/REC STILL/PAUSE CUE FWD SLOW STOP 3*1
STOP*2
FF/REW

*1 :Stop 3;The Pinch Roller is on the capstan motor shaft.

*2 :Stop ;The Pinch Roller is off the capstan motor shaft.

*3 :Service Data Number;This is for Service Mode Number2.

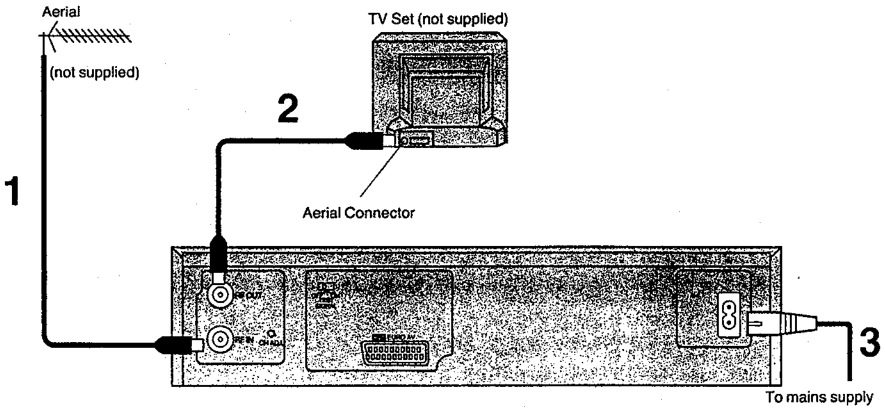
Fig. D7 Timing Chart of Mode SW

Connections

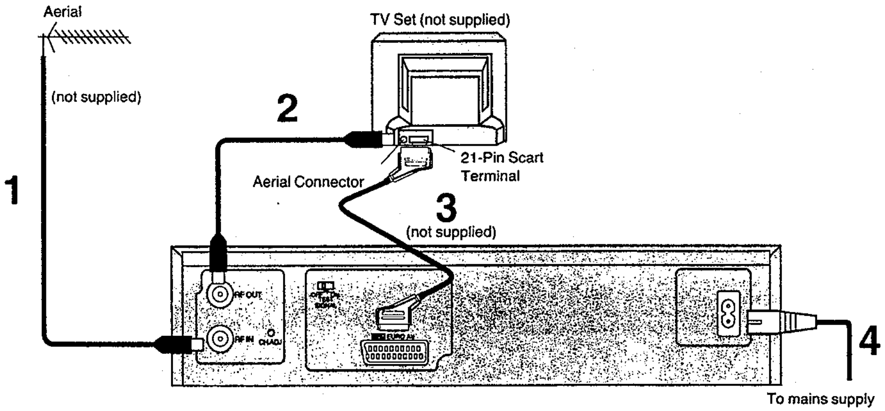
This tells you how to connect the VTR to an aerial, TV, etc.

Basic Connections

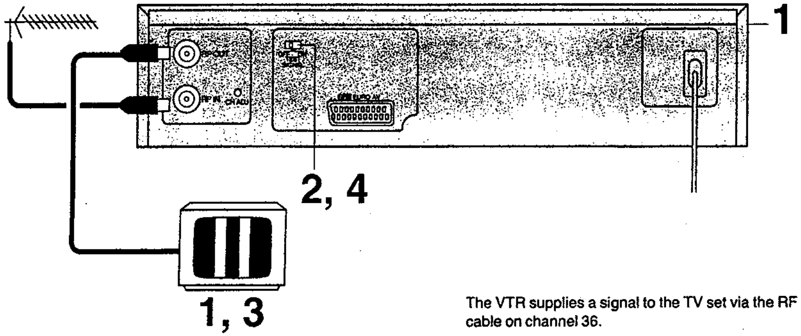
The following connections are required to record and play back the VTR through a TV set:


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
RF OUT
RF IN
CH ADJ
3
To mains supply

Connection to a TV Set with 21-Pin Scart Terminal


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
21-Pin Scart Terminal
3
(not supplied)
RF OUT
RF IN
CH ADJ
4
To mains supply

Tuning the TV to your VTR



The VTR supplies a signal to the TV set via the RF coaxial cable on channel 36.

It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

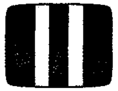
If you have connected the VTR to the TV through the 21-pin scart terminal then you do not need to follow the procedure mentioned below.

Operations

1

Turn on the TV and VTR.

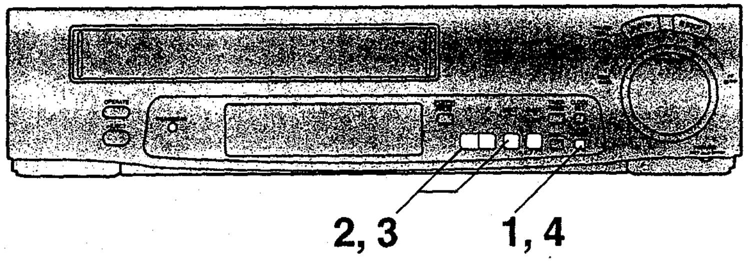
2
OFF ON
TEST
SIGNAL
To generate a test pattern, set **TEST SIGNAL** to ON.

3 
Set the TV to an unused position which you wish to use for your video playback.

4
OFF ON
TEST
SIGNAL
Set **TEST SIGNAL** to OFF.

Note:
The test signal is transmitted on video channel 36.
If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (32–40) by using the **CH ADJ.** screw which is located on the rear of the VTR.
Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.

Storing TV Broadcasts into your VTR



Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except A1.

Operations **Display Symbols**

1 TUNER PRESET

Keep **TUNER PRESET** pressed until a bleep sound is heard.

2 – + → NEXT

Select the programme position, then press **NEXT**.

3 – +

Search for the required TV station.
- Press **PAL/MESECAM** to select SECAM system so that MESECAM indicator is lit.
- Press **NEXT** and repeat steps 2–3 for each programme position you want to tune to a station.

4 TUNER PRESET

Press **TUNER PRESET** twice.

Fine Tuning Procedure

1 Press **TUNER PRESET** until a bleep sound is heard, and then press again.

2 Press **NEXT**.

3 Press + or – to obtain the best tuning condition.
- "AFC" indicator disappears.
- To return the tuning to its former state, press **SHIFT**.

4 Press **TUNER PRESET**.

Blanking of Unoccupied Programme Positions

1 Press **TUNER PRESET** until a bleep sound is heard.

2 Select a programme position which you do not want to tune to a TV station, by using + or –.

3 Press **SHIFT**. ("- –" is displayed.)
- Repeat steps 2 and 3 for other unoccupied programme positions to skip during the selection of the programme positions.
- To cancel the blanking of a programme position, select that programme position on the VTR and then press **SHIFT**.

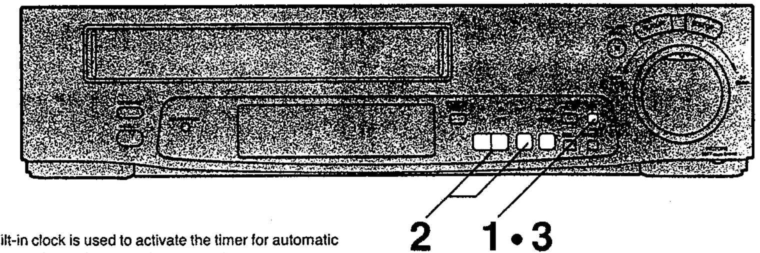
4 Press **TUNER PRESET** twice.

Channel Plan

Channel Indication	TV Channel	
	Germany/Italy	**Other Countries**
2–12	*E2–E12	E2–E12
13–20	A–H (Only Italy)	—
21–69	21–69	21–69
74–76	—	S1–S3
80–82	—	M1–M3
83–89	S4–S10	M4–M10
90–99	S11–S20	U1–U10
121–141	S21–S41 (Only Italy)	S21–S41

*In Italy: H1...(11), H2...(12)

Setting the Clock of the VTR

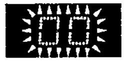
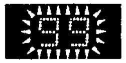
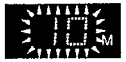
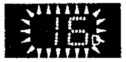
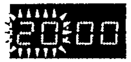
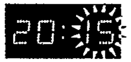
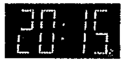


The built-in clock is used to activate the timer for automatic recording and must be set to the correct time.
The built-in digital clock employs the 24-hour system.

Preparation

Turn on the VTR.

For Example:
Date; 16th, October, 1999
Time; 20:15

Operations	Display Symbols	
1 CLOCK SET		Keep **CLOCK SET** pressed until a bleep sound is heard.
2 Set each item by pressing + or – and **NEXT**.		
– +		Set **Year** "99".
		Set **Month** "10".
		Set **Date** "16".
NEXT		Set **Hour** "20".
		Set **Minute** "15". •There is no need to press **NEXT**.
3 CLOCK SET		Press **CLOCK SET**. •The clock will start.

Note:
The clock operates for at least 60 minutes by its backup system in the event of power failure.

Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

For example: Resetting the clock to 12:00.00.

1. Press **CLOCK SET** at any time between 11:58.00 and 12:01.59 until the beep sound is heard.
2. Press **CLOCK SET** again as soon as you hear the 12:00.00 time signal.

Summer Time Function

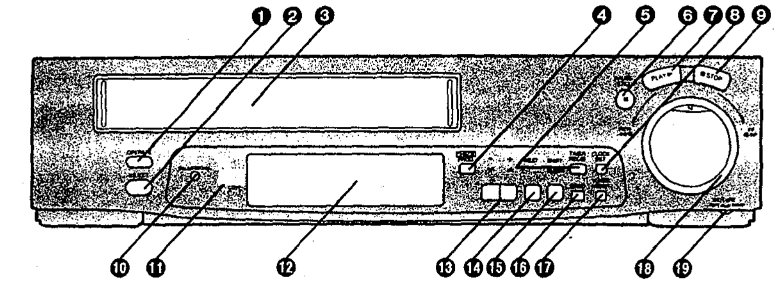
Setting to summer time

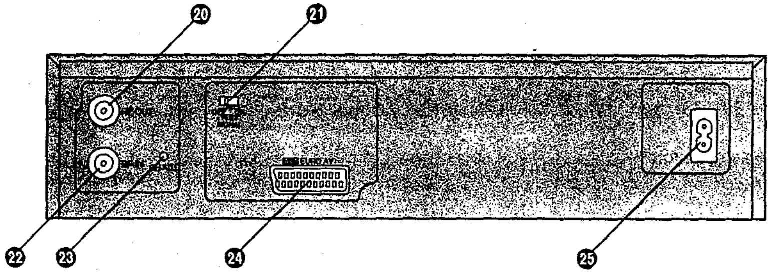
1. Keep **CLOCK SET** pressed until the beep sound is heard.
2. Press **SHIFT**.
   - The time on the clock is advanced by 1 hour.
3. Press **CLOCK SET**.

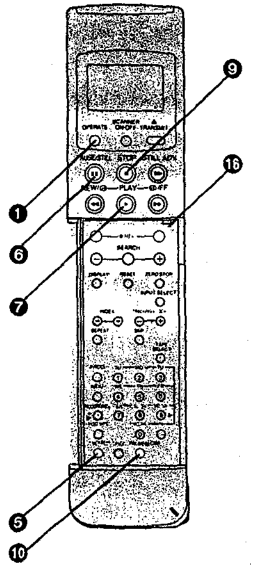
Returning from summer time to standard time

1. Keep **CLOCK SET** pressed until the beep sound is heard.
2. Press **SHIFT** twice.
   - The time on the clock is set back by 1 hour.
3. Press **CLOCK SET**.

Controls and Connection Sockets







① **OPERATE**
To turn the VTR on and off.

② **EJECT**
To eject a video cassette.

③ **Cassette Compartment**
Insert a video cassette here.

④ **CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.

⑤ **TIMER REC**
To turn the timer recording function on and off.
⊡ is lit or not lit.
Once activating timer recording function, the normal VTR operation is not possible unless this button is set to off.

⑥ **PAUSE/STILL**
During playback: Still picture.
During recording: To interrupt recording.

⑦ **PLAY**
To start playback. "▷" is lit.

⑧ **CLOCK SET**
To set the time.

⑨ **STOP**
To stop any playback or recording.

⑩ **PAL/MESECAM**
Set according to the colour TV system used during recording and playback.
When the MESECAM Indicator is lit, the MESECAM system is selected.

⑪ **Infra-red Remote Control Receiver Window**

⑫ **Display**

⑬ **∨ ∧/− +**
To select the required programme position (TV station).
To set the clock and timer recording.

⑭ **NEXT**
To proceed to the next item during setting procedure.

⑮ **SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To blank unoccupied programme position.

⑯ **REC**
To start a recording.

⑰ **TUNER PRESET**
To initiate TV station settings for the tuner.

⑱ **Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.

⑲ **PICTURE**
To make picture sharper (SHARP) or softer (SOFT).

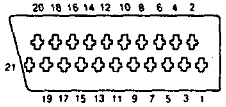
⑳ **RF OUT**
To connect to the aerial terminal on a TV set.

㉑ **TEST SIGNAL**
The test signal is transmitted on channel 36.

㉒ **RF IN**
To connect to the external aerial.

㉓ **CH ADJ.**
To adjust the RF transmitting channel 32–40.

㉔ **EURO AV (AV1)**
This 21-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.

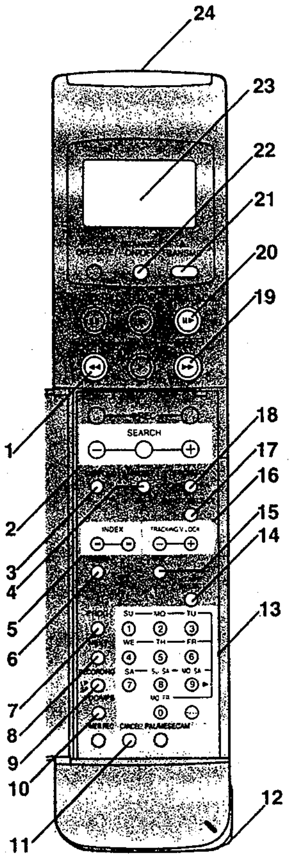


1 AUDIO OUTPUT	8 SWITCHING VOLTAGE
2 AUDIO INPUT	17 VIDEO GROUND
3 AUDIO OUTPUT	19 VIDEO OUTPUT
4 AUDIO GROUND	20 VIDEO INPUT
6 AUDIO INPUT	21 GROUND

No connection; 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18

㉕ **AC IN~**
To connect to the main power supply.

Infra-red Remote Controller



1 REW (REWIND)

In the stop mode: To rewind the tape.
In the playback mode: To search backward.
In the rewind mode: To obtain high speed picture.
"◁◁" is lit.

2 SEARCH

To adjust the playback speed backward or forward.

3 DISPLAY

To change the indication on the VTR Display.

→Clock→Counter→Remaining Tape Time─┐

4 RESET

To reset the tape counter (elapsed time) to "0:00.00".

- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

5 INDEX

For the index search function.

6 REPEAT

For the repeat playback function.

7 PROG

For timer recording by using the remote controller.

8 NEXT

To proceed to the next item during setting procedure.

9 RECORDING SP/LP

No function.

10 PDC/VPS

To turn the VPS or PDC function on and off.

11 CANCEL

To cancel the settings made for a timer recording.

12 Bar Code Reading Section

After the Bar Code Reader is turned on, the tip lights in red.

13 Programme Position Selector Buttons

- To select the programme positions.

MO-SA
9: ⑨▶
SU MO-SA
19: (-/--) → ① → ⑨▶

- To programme a timer recording.

14 TAPE SELECT

To set the cassette tape length in order to obtain correct indication of the remaining tape time.
E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

15 SKIP

To start cue playback in 30 seconds interval during playback.

- Each press gives a 30 seconds time span up to 4 minutes.

16 TRACKING/V-LOCK

For manual tracking adjustment
The + and − buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment
When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "−" button to reduce the noise bars.

For vertical locking adjustment
Use the + and − buttons to minimize any vertical jitter during still-picture playback.

17 INPUT SELECT

To select the "A1" external recording source.

18 ZERO STOP

For the zero stop function.

19 FF (FAST FORWARD)

In the stop mode: To fast forward the tape.
In the playback mode: To search forward.
In the fast forward mode: To obtain high speed picture.
"▷▷" is lit.

20 STILL ADV

To advance a still picture during still playback.

21 TRANSMIT

To transmit the data that has been set on the remote controller to the VTR.

22 SCANNER ON/OFF

To turn the Bar Code Reader on and off.

23 Display

24 Infra-red Transmitter

The programming data are transmitted from here to the VTR.

Power source for the remote controller

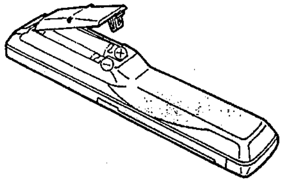
The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

- If the display flickers when a button on the remote controller is pressed, please replace the batteries with new ones.

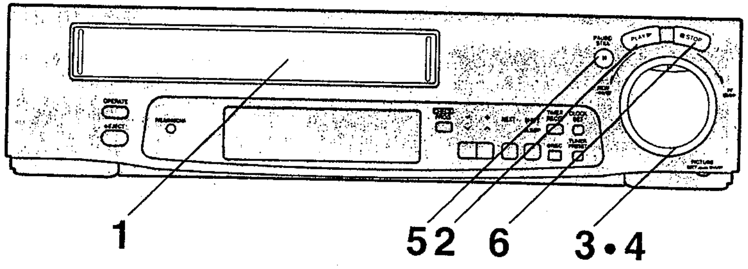
Precautions for battery replacement

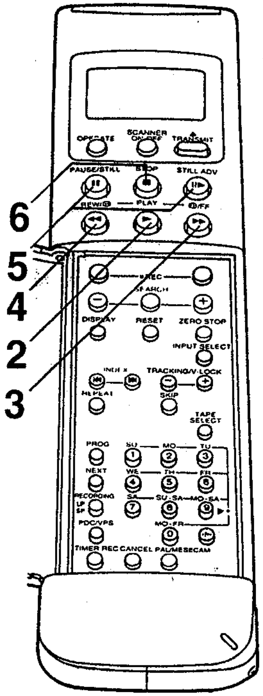
- Load the new batteries with their polarity (⊕ and ⊖) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

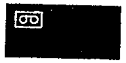
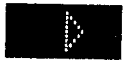
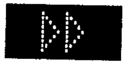
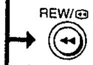
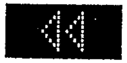
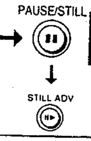
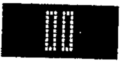
Loading the batteries



Playback





Operations	Display Symbols	
1		Insert a recorded cassette tape.
2		Start viewing the picture.
3		Search forward by tapping **FF**. •To change back to normal playback, press **PLAY**.
4 		Search backward by tapping **REW**. •To change back to normal playback, press **PLAY**.
5 		View a still picture. •To advance one frame of the still picture, press **STILL ADV**. •To continue the normal playback, press **PLAY** or **PAUSE/STILL**.
6		Stop viewing the picture.

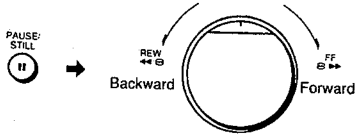
Other Playback Functions

To change the playback speed

Using Shuttle Ring:

1 Press **PAUSE/STILL.**

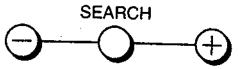
2 Rotate Shuttle Ring.



Using Remote Controller:

1 Press **SEARCH.**

2 Press + or – repeatedly.
 +: To increase the playback speed forward
 –: To increase the playback speed backward



To obtain high speed picture during fast forward or rewind

Keep **FF** pressed during fast forward.
Keep **REW** pressed during rewind.

- The same operation can also be performed by turning the Shuttle Ring.

To skip scene

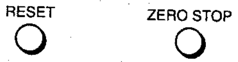
Press **SKIP** during playback.

- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To return to a specified scene

1 Press **RESET** to set the counter to 0:00.00.

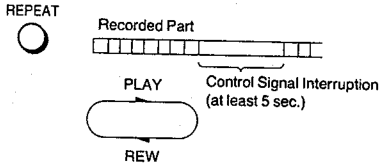
2 After playback, press **ZERO STOP** in the stop mode.



- The tape will be rewound or fast forwarded to 0:00.00.

To playback a recorded part repeatedly

Press **REPEAT** in the stop mode.



To find the beginning of each recording

For example:
Searching for the 2nd recorded segment in the forward direction.
Press **INDEX ▶▶I** twice.

- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX I◀◀**.
- Up to 20 programmes can be searched for in both directions.

Recording Index Signals

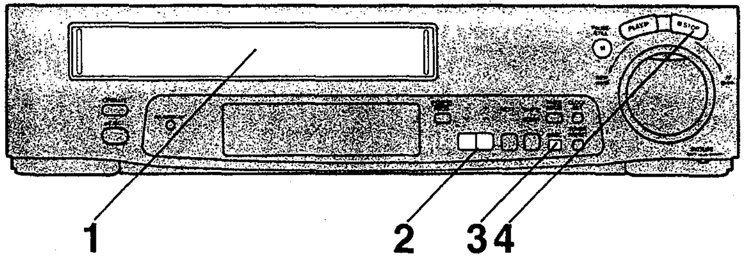
Index signals are recorded in following cases.
WRITE indicator appears on the Display.

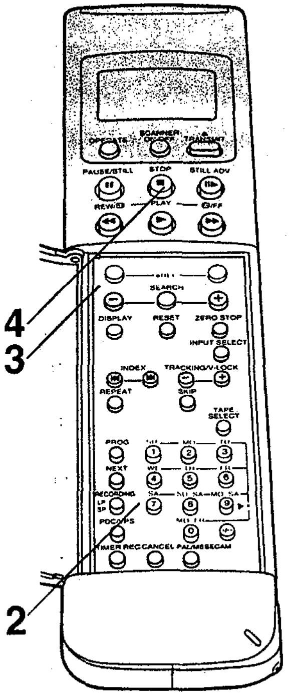
- When a recording is started by pressing **REC.**
- When **REC** is pressed during recording.
- When timer recording is activated.

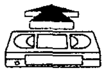
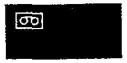
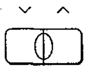
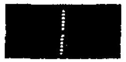
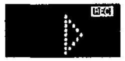
Notes:

- During Playback, set **PAL/MESECAM.**
  PAL: When playing back a tape recorded in the PAL system.
  MESECAM: When playing back a tape recorded in the MESECAM system. MESECAM Indicator lights up.
- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.

On-the-spot Recording

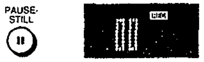

1
2
3
4
PLAY
STOP


4
3
2
OPERATE
PAUSE/STILL
STOP
STILL ADV
REW
PLAY
FF
SEARCH
DISPLAY
RESET
ZERO STOP
INPUT SELECT
INDEX
TRACKING/V-LOCK
REPEAT
SKIP
TAPE SELECT
PROG
NEXT
POC/PS
TIMER REC
CANCEL
PAL/MESECAM

Operations	Display Symbols	
1 		Insert a cassette tape. • If it has already been inserted, press **OPERATE** to turn the VTR on.
2 		Select TV station.
3 ●REC		Start recording.
4		Stop recording.

To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.


PAUSE-STILL

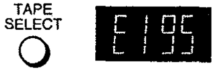
To record one TV programme while viewing another programme

1 Refer to the on-the-spot recording operations steps 1 to 3.

2 Select the TV programme on your TV set you wish to view at the present time.

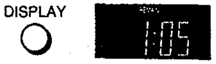
To display the approximate remaining tape time

1 Press **TAPE SELECT** to select the corresponding cassette tape length.


TAPE SELECT
E195

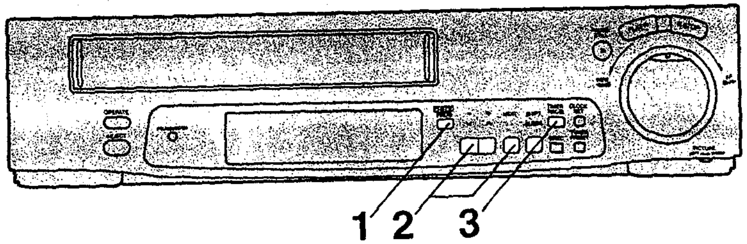
E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

2 Press **DISPLAY**.


DISPLAY
1:05

Notes:
- When a video cassette with a broken off tab is inserted, the "▭" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.

Timer Recording



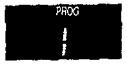
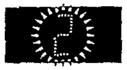
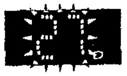
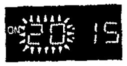
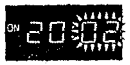
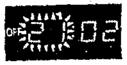
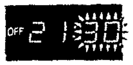
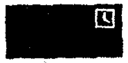
Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including daily and weekly programmes.

Preparation

Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer programme number;	1
Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30
(present date; 16th October)	

	Operations	Display Symbols	
1	CHECK PROG		Select **Timer programme number** "1".
2	Set each item by pressing + or – and **NEXT**.		
	– +		Set **Programme position** (channel) "2".
			Set **Date** "27". •For daily and weekly recording, see next page.
			Set **Starting time** (hour) "20".
			Set **Starting time** (minute) "02".
	NEXT		Set **Ending time** (hour) "21".
			Set **Ending time** (minute) "30". •There is no need to press **NEXT**.
3	TIMER REC		To activate timer recording, press **TIMER REC**.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press – repeatedly until the desired day(days) is displayed.

Daily recording From Sundy to Saturday	SU MO TU WE TH FR SA
From Monday to Saturday	MO TU WE TH FR SA
From Monday to Friday	MO TU WE TH FR
Weekly recording For example, Sunday	SU

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV socket, select the A1 indicator for the programme position.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing **CHECK/PROG**.

Cancelling a Timer Programme

1 Release from the standby mode by pressing **TIMER REC.**

2 Select the timer programme number to be canceled by pressing **CHECK/PROG.**

3 Press + and – simultaneously for more than 3 seconds.

VPS (Video Programme System)/PDC (Programme Delivery Control)

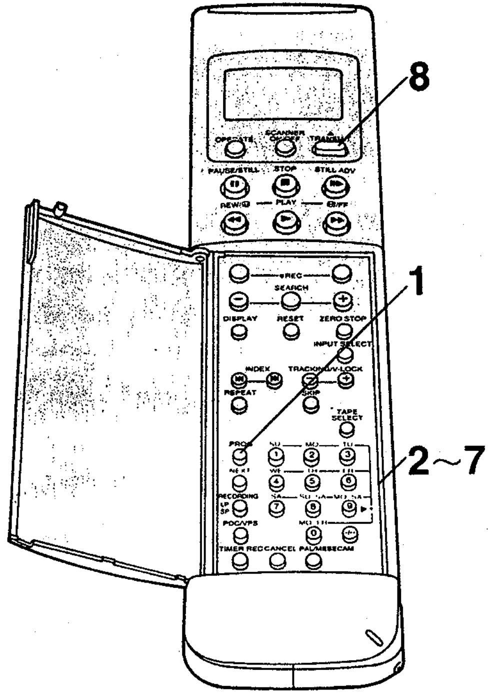
The Video Programme System (VPS) or the Programme Delivery Control (PDC) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

- Press **SHIFT** in step 2 to cancel the VPS (PDC) function.
- If the actual broadcasting times of timer recordings overlap [regardless of whether they are VPS (PDC)-controlled], the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the VPS (PDC) signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular VPS (PDC) signal, the timer recording will be performed in the normal mode (without VPS/PDC) even if it was programmed for VPS (PDC).
  In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.
- Model NV-SD30EO is not equipped with VPS (PDC) function. The VPS (PDC) function becomes operative when the VTR is equipped with the optional VPS (PDC) decoder. Consult your authorized video dealer.

Note:

If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. two days later.
However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

Using the Remote Controller



For Example:

Programme position (channel);	27
Date;	3rd, November
Starting time;	20:02
Ending time;	21:30
(Present date; 16th, October)	

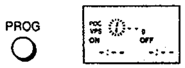
Note:
If no operation is performed on the remote controller for more than 60 seconds, the Display turns off.

Preparation

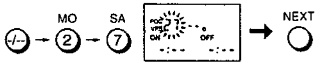
Insert a cassette tape with an intact erasure prevention tab.

Operations

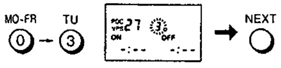
1 Press **PROG**.



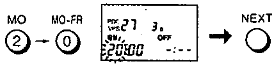
2 Enter **Programme position** "27",
then press **NEXT**.



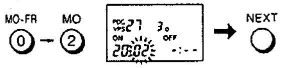
3 Enter **Date** "3",
then press **NEXT**.



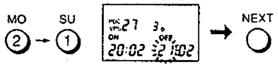
4 Enter **Starting time** (hour) "20",
then press **NEXT**.



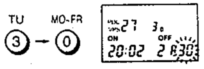
5 Enter **Starting time** (minute) "02",
then press **NEXT**.



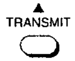
6 Enter **Ending time** (hour) "21",
then press **NEXT**.



7 Enter **Ending time** (minute) "30".



8 Press **TRANSMIT**.



The transmitted data appears on the display of the VTR and a repeated bleep confirms the reception.

Daily Timer Recording

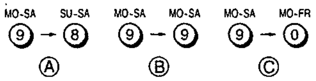
For this timer function, several groups of days can be selected.

Ⓐ Daily recording from Sunday to Saturday

Ⓑ Daily recording from Monday to Saturday

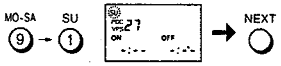
Ⓒ Daily recording from Monday to Friday

Press the following numeric button within 5 seconds to select the group of days in step 3.



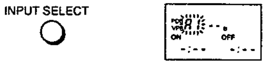
Weekly Timer Recording

Press the 9 button and then the numeric button within 5 seconds in step 3.
For example, SU (Sunday)



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV socket, press **INPUT SELECT** to select the A1 indicator for the programme position.



Turning VPS (PDC) function on and off

Press **PDC/VPS** in any of steps 2–7.

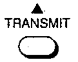
Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "⊡" is lit.
- Make sure that the display of the Remote Controller is not on.

Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

Cancelling a Timer Programme

1 Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.



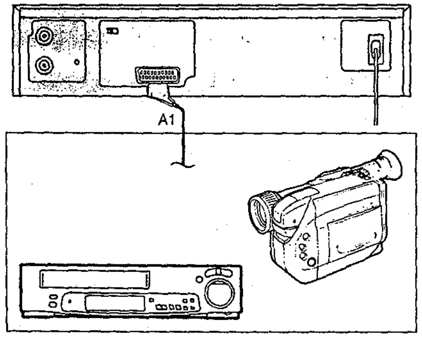
2 Press **CANCEL**.

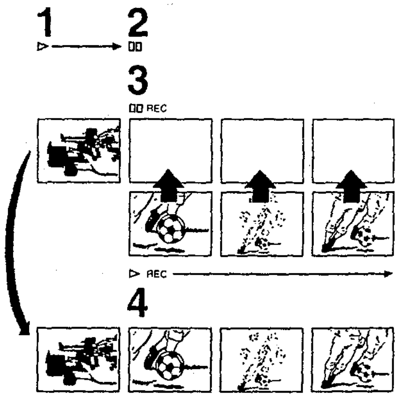
Editing

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

This enables you to record a new segment immediately after a previously recorded segment.





Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1.
- Set **PAL/MESECAM** according to the colour TV system of the video source.
  PAL: When receiving PAL signals
  MESECAM: When receiving SECAM signals
  The MESECAM Indicator lights up.

Operations

1 Search for the end of the previous recording.

PLAY

2 Press **PAUSE/STILL** at the end point.

PAUSE/STILL

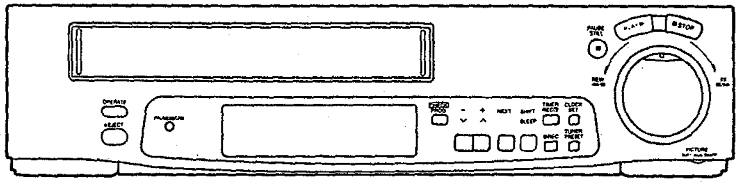
3 Set for the new recording by pressing **REC.**

●REC

4 Start the new recording by pressing **PAUSE/STILL** again.

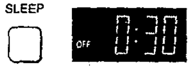
PAUSE/STILL

Other Functions



Automatic VTR off at time setting

Press **SLEEP** for the desired time.



- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press **SLEEP** repeatedly to set 0:00.

Other Automatic Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

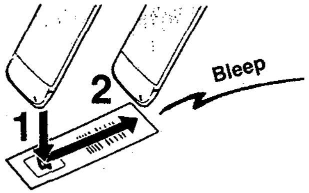
Bar Code Operation

Scanner Preparation

Operating the Remote Controller

Press **SCANNER ON/OFF** to turn it on.
If the remote controller is not operated within 60 seconds (within 4 minutes when setting the clock time), the lamp and Display turns off.

How to use the Scanner



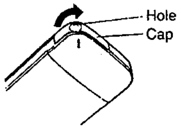
When the Bar Codes Cannot be Read

Although the lamp in the tip of the Bar Code Reading Section lights up:

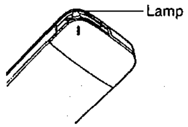
- No figures appear in the Display
- No bleep sounds is heard;

The tip of the Bar Code Reading Section is probably clogged with dirt.

1 Remove the cap.



2 Gently wipe the tip of the lamp with a soft cloth.



Setting the Clock

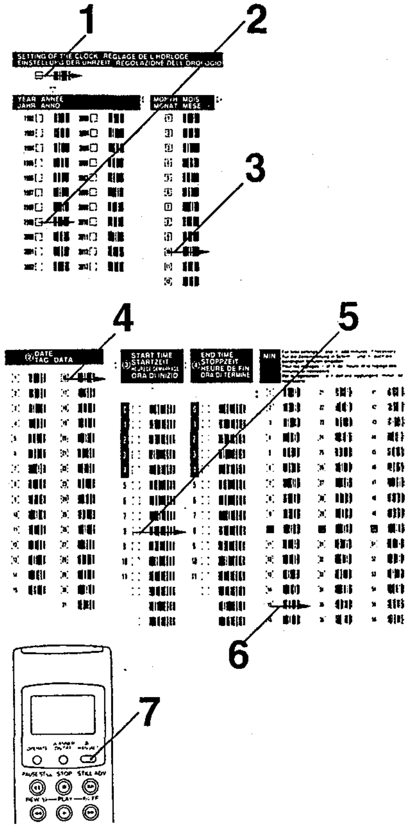
Read in the following data successively by tracing bar codes 1 to 6 on the programming sheet.

Preparation

Turn on the VTR and the remote controller.

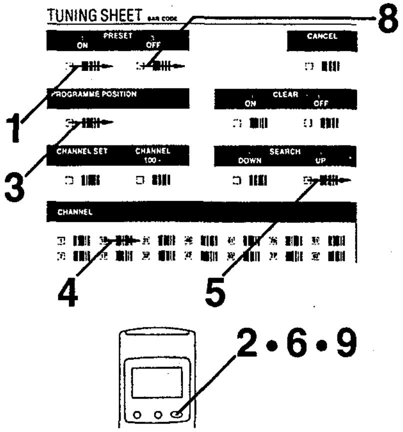
For Example:

Date; 16th, October 1999
Time; 8:15


1
2
SETTING OF THE CLOCK REGLAGE DE L'HORLOGE
EINSTELLUNG DER UHRZEIT REGOLAZIONE DELL'OROLOGIO
YEAR ANNEE JAHR ANNO
MONTH MOIS MONAT MESE
3
4
5
DATE TAG DATA
START TIME STARTZEIT ORA DI INIZIO
END TIME STOPPZEIT HEURE DE FIN ORA DI TERMINE
MIN
6
7

Storing TV Broadcasts

Read in the required data successively by tracing the bar codes on page 91.


TUNING SHEET
8
PRESET
ON
OFF
CANCEL
PROGRAMME POSITION
CLEAR
ON
OFF
1
CHANNEL SET
CHANNEL 100-
SEARCH
DOWN
UP
3
CHANNEL
4
5
2•6•9

Preparation

Turn on the VTR and the Remote Controller.

Operations

1. Trace the bar code "PRESET ON".
   - If no operations are performed within more than 4 minutes, the Digital Scanner will automatically turn itself off.
2. Press **TRANSMIT** to transmit to the VTR.
3. Trace the bar code "PROGRAMME POSITION".
4. Trace the bar code for the programme position (channel) that you want to tune to a station.
5. Trace the bar code "SEARCH UP" or "SEARCH DOWN".
6. Press **TRANSMIT** to transmit to the VTR.
   - The channel will be tuned automatically.
   - At every push of the button, the next channel will be tuned.
7. Press **PAL/MESECAM** to select SECAM system so that MESECAM indicator is lit on the VTR Display.
8. Trace the bar code "PRESET OFF".
9. Press **TRANSMIT**.

Notes:

- If you make a mistake in the above operation steps, trace the bar code "CANCEL" and start again from step 4.
- When setting more than 2 channels, repeat the steps 3–7 above.

Setting the Tuner Directly

Perform the operation steps 1–4.

5. Trace the bar code "CHANNEL SET".
6. Trace the number of the channel for the TV station that you want to tune.
   - When tuning a TV station in the hyperband, trace the bar code "CHANNEL 100~" and then trace the bar code "CHANNEL".

   Press **TRANSMIT** to transmit to the VTR.

Perform the operation steps 7–9.

If you want to tune further TV stations, repeat the steps 3 to 7.

Blanking of Unoccupied Programme Positions

Perform the operation steps 1–3.

4. Trace the bar code for the programme position that you want to blank so that it will be skipped during Up/Down selection of the programme position.
5. Trace the bar code "CLEAR ON".
6. Press **TRANSMIT** to transmit to the VTR.
7. Trace the bar code "PRESET OFF".
8. Press **TRANSMIT**.

Cancelling the Clear Function (Blanking)

Perform the operation steps 1–3 above.

4. Trace the bar code for the programme position that has been blanked until now.
5. Trace the bar code "CLEAR OFF".

Perform the operation steps 6–8 above.

- To programme a timer recording or the set the clock time immediately after setting the tuner in the VTR by using the Remote Controller, first press **SCANNER ON/OFF** on the Remote Controller to turn it off, before starting the above operation.

Timer Recording

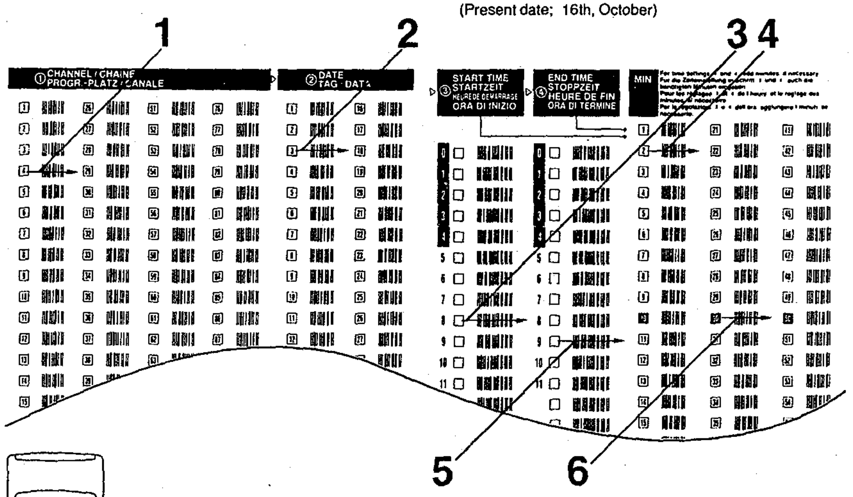
Successively scan the data for the programme position (channel), day, starting time and ending time by tracing bar codes 1 to 6 on the programming sheet.

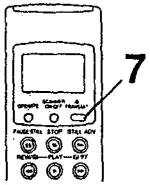
Preparation

Turn on the remote controller.

For Example:

Programme position (channel);	4
Date;	3rd, November
Starting time;	8:02
Ending time;	9:30
(Present date; 16th, October)	


1
2
3
4
5
6
① CHANNEL / CHAINE PROGR.-PLATZ / CANALE
② DATE TAG DATA
③ START TIME STARTZEIT HEURE DE DEMARRAGE ORA DI INIZIO
④ END TIME STOPPZEIT HEURE DE FIN ORA DI TERMINE
MIN



Daily and Weekly Timer Recording

In the step 2, trace the bar code for:

Daily

Sunday to Saturday (SU~SA) ☐

Monday to Friday (MO~FR) ☐

Monday to Saturday (MO~SA) ☐

Weekly

For example; Sunday

EVERYWEEK
WÖCHENTLICH
HEBDOMADAIRE
SETTIMANALE

SU

Timer Recording from External Signal Source

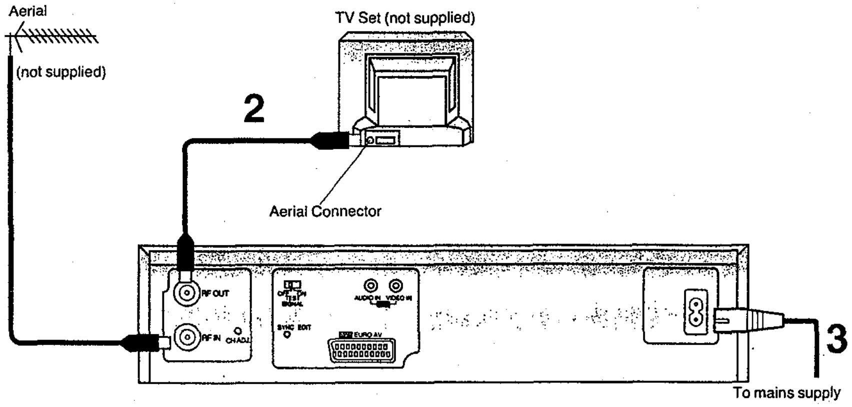
If Timer Recording is performed by a unit connected to the Euro AV socket, the A1 bar code in the CHANNEL column must be traced in the step 1.

Connections

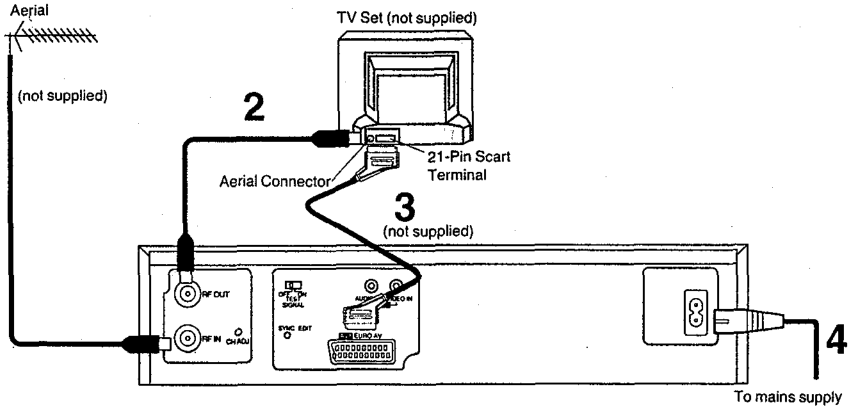
This tells you how to connect the VTR to an aerial, TV, etc.

Basic Connections

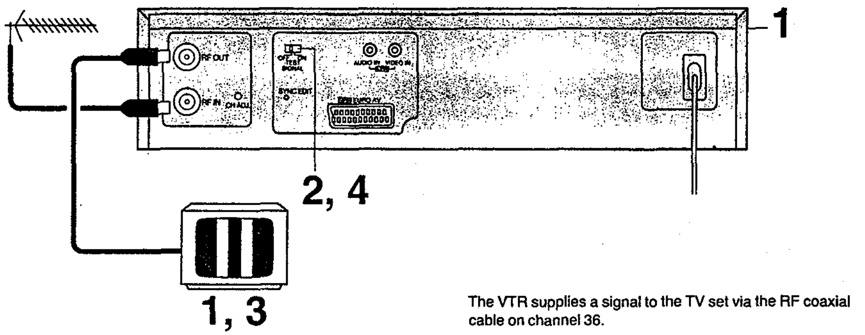
The following connections are required to record and play back the VTR through a TV set:


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
RF OUT
RF IN
CH ADJ.
OFF ON TEST SIGNAL
SYNC EDIT
AUDIO IN VIDEO IN
EURO AV
3
To mains supply

Connection to a TV Set with 21-Pin Scart Terminal


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
21-Pin Scart Terminal
3
(not supplied)
RF OUT
RF IN
CH ADJ.
OFF ON TEST SIGNAL
SYNC EDIT
AUDIO IN VIDEO IN
EURO AV
4
To mains supply

Tuning the TV to your VTR

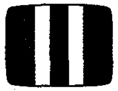

1
RF OUT
RF IN
CH ADJ.
OFF ON TEST SIGNAL
SYNC EDIT
AUDIO IN VIDEO IN
EURO AV
2, 4
1, 3

The VTR supplies a signal to the TV set via the RF coaxial cable on channel 36.

It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

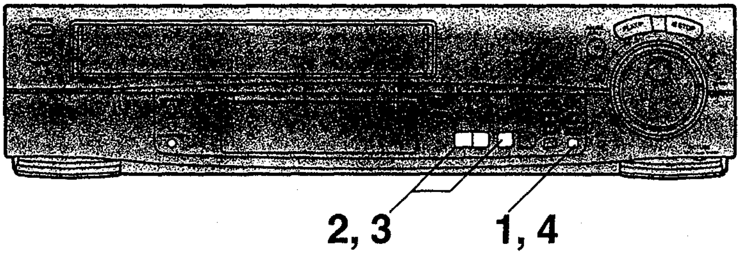
If you have connected the VTR to the TV through the 21-pin scart terminal then you do not need to follow the procedure mentioned below.

Operations

1	OPERATE	Turn on the TV and VTR.
2	OFF ON TEST SIGNAL	To generate a test pattern, set **TEST SIGNAL** to ON.
3		Set the TV to an unused position which you wish to use for your video playback.
4	OFF ON TEST SIGNAL	Set **TEST SIGNAL** to OFF.

Note:
The test signal is transmitted on video channel 36.
If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (32–40) by using the **CH ADJ.** screw which is located on the rear of the VTR.
Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.

Storing TV Broadcasts into your VTR

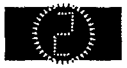
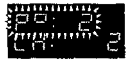


Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except A1 and A2.

	Operations	Display Symbols	
1	TUNER PRESET		Keep **TUNER PRESET** pressed until a bleep sound is heard.
2	– + → NEXT		Select the programme position, then press **NEXT**.
3	– +		Search for the required TV station. • Press **PAL/MESECAM** to select SECAM system so that MESECAM indicator is lit. • Press **NEXT** and repeat steps 2–3 for each programme position you want to tune to a station.
4	TUNER PRESET		Press **TUNER PRESET** twice.

Fine Tuning Procedure

1 Press **TUNER PRESET** until a bleep sound is heard, and then press again.

2 Press **NEXT**.

3 Press + or – to obtain the best tuning condition.
- "AFC" indicator disappears.
- To return the tuning to its former state, press **SHIFT**.

4 Press **TUNER PRESET**.

Blanking of Unoccupied Programme Positions

1 Press **TUNER PRESET** until a bleep sound is heard.

2 Select a programme position which you do not want to tune to a TV station, by using + or –.

3 Press **SHIFT**. ("– –" is displayed.)
- Repeat steps 2 and 3 for other unoccupied programme positions to skip during the selection of the programme positions.
- To cancel the blanking of a programme position, select that programme position on the VTR and then press **SHIFT**.

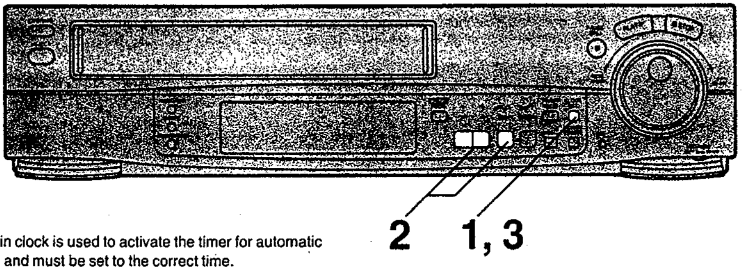
4 Press **TUNER PRESET** twice.

Channel Plan

Channel Indication	TV Channel	
	Germany/Italy	Other Countries
2–12	*E2–E12	E2–E12
13–20	A–H (Only Italy)	—
21–69	21–69	21–69
74–76	—	S1–S3
80–82	—	M1–M3
83–89	S4–S10	M4–M10
90–99	S11–S20	U1–U10
121–141	S21–S41 (Only Italy)	S21–S41

*In Italy: H1...(11), H2...(12)

Setting the Clock of the VTR



The built-in clock is used to activate the timer for automatic recording and must be set to the correct time.
The built-in digital clock employs the 24-hour system.

Preparation
Turn on the VTR.

For Example:
Date; 16th, October, 1999
Time; 20:15

Operations		Display Symbols	
1	CLOCK SET ▣	00	Keep **CLOCK SET** pressed until a bleep sound is heard.
2	Set each item by pressing + or – and **NEXT**.		
	– +	99	Set **Year** "99".
		10 M	Set **Month** "10".
	⬇	16 D	Set **Date** "16".
	NEXT ☐	20:00	Set **Hour** "20".
		20:15	Set **Minute** "15". •There is no need to press **NEXT**.
3	CLOCK SET ▣	20:15	Press **CLOCK SET**. •The clock will start.

Note:
The clock operates for at least 60 minutes by its backup system in the event of power failure.

Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

For example: Resetting the clock to 12:00.00.

1 Press **CLOCK SET** at any time between 11:58.00 and 12:01.59 until the bleep sound is heard.

2 Press **CLOCK SET** again as soon as you hear the 12:00.00 time signal.

Summer Time Function

Setting to summer time

1 Keep **CLOCK SET** pressed until the bleep sound is heard.

2 Press **SHIFT**.
•The time on the clock is advanced by 1 hour.

3 Press **CLOCK SET**.

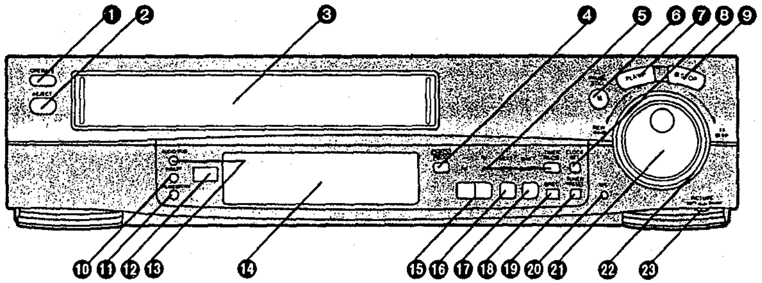
Returning from summer time to standard time

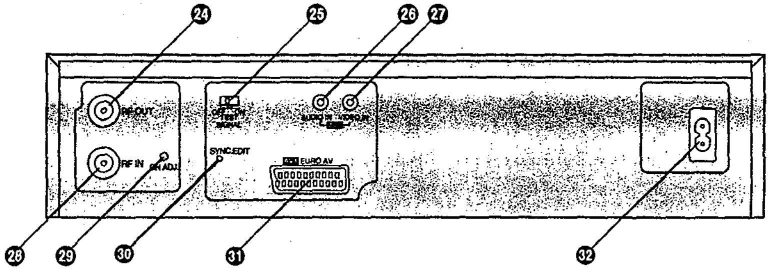
1 Keep **CLOCK SET** pressed until the bleep sound is heard.

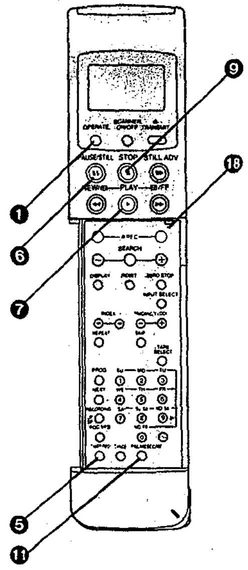
2 Press **SHIFT** twice.
•The time on the clock is set back by 1 hour.

3 Press **CLOCK SET**.

Controls and Connection Sockets







① **OPERATE**
To turn the VTR on and off.

② **EJECT**
To eject a video cassette.

③ **Cassette Compartment**
Insert a video cassette here.

④ **CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.

⑤ **TIMER REC**
To turn the timer recording function on and off.
⏲ is lit or not lit.
Once activating timer recording function, the normal VTR operation is not possible unless this button is set to off.

⑥ **PAUSE/STILL**
During playback: Still picture.
During recording: To interrupt recording.

⑦ **PLAY**
To start playback. "▷" is lit.

⑧ **CLOCK SET**
To set the time.

⑨ **STOP**
To stop any playback or recording.

⑩ **INSERT**
To set up the VTR for insert editing.
INSERT indicator lights up.

⑪ **PAL/MESECAM**
Set according to the colour TV system used during recording and playback.
When the MESECAM Indicator is lit, the MESECAM system is selected.

⑫ **Infra-red Remote Control Receiver Window**

⑬ **AUDIO DUB**
To set up the VTR for audio dubbing.
A.DUB indicator lights up.

⑭ **Display**

⑮ **∨ ∧/– +**
To select the required programme position (TV station).
To set the clock and timer recording.

⑯ **SP/LP/NEXT**
To select the tape speed required for recording.
SP gives the best picture quality.
LP gives the longest recording time.
To proceed to the next item during setting procedure.

⑰ **SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To blank unoccupied programme position.

⑱ **REC**
To start a recording.

⑲ **TUNER PRESET**
To initiate TV station settings for the tuner.

⑳ **MIC**
To connect a microphone for recording.

㉑ **Jog Dial**
To locate any desired frame with utmost precision.

㉒ **Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.

㉓ **PICTURE**
To make picture sharper (SHARP) or softer (SOFT).

㉔ **RF OUT**
To connect to the aerial terminal on a TV set.

㉕ **TEST SIGNAL**
The test signal is transmitted on channel 36.

㉖ **AUDIO IN (AV2)**
To connect an audio cable to a video camera or another video recorder.

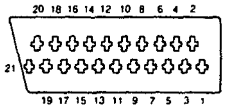
㉗ **VIDEO IN (AV2)**
To connect a video cable to a video camera or another video recorder.

㉘ **RF IN**
To connect to the external aerial.

㉙ **CH ADJ.**
To adjust the RF transmitting channel 32–40.

㉚ **SYNC. EDIT**
Connecting to a Movie Camera equipped with Synchro Edit Function.

㉛ **EURO AV (AV1)**
This 21-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.

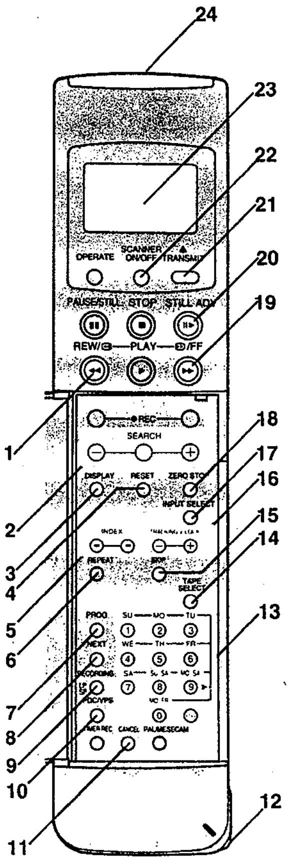


1	AUDIO OUTPUT	8	SWITCHING VOLTAGE
2	AUDIO INPUT	17	VIDEO GROUND
3	AUDIO OUTPUT	19	VIDEO OUTPUT
4	AUDIO GROUND	20	VIDEO INPUT
6	AUDIO INPUT	21	GROUND

No connection; 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18

㉜ **AC IN~**
To connect to the main power supply.

Infra-red Remote Controller



1 REW (REWIND)
In the stop mode: To rewind the tape.
In the playback mode: To search backward.
In the rewind mode: To obtain high speed picture.
"⊲⊲" is lit.

2 SEARCH
To adjust the playback speed backward or forward.

3 DISPLAY
To change the indication on the VTR Display.

→Clock→Counter→Remaining Tape Time—┘

4 RESET
To reset the tape counter (elapsed time) to "0:00.00".
- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

5 INDEX
For the index search function.

6 REPEAT
For the repeat playback function.

7 PROG
For timer recording by using the remote controller.

8 NEXT
To proceed to the next item during setting procedure.

9 RECORDING SP/LP
To select the tape speed desired for recording.

10 PDC/VPS
To turn the VPS or PDC function on and off.

11 CANCEL
To cancel the settings made for a timer recording.

12 Bar Code Reading Section
After the Bar Code Reader is turned on, the tip lights in red.

13 Programme Position Selector Buttons
- To select the programme positions.

MO-SA
9: ⑨▸
SU MO-SA
19: (-/--) → ① → ⑨▸

- To programme a timer recording.

14 TAPE SELECT
To set the cassette tape length in order to obtain correct indication of the remaining tape time.
E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

15 SKIP
To start cue playback in 30 seconds interval during playback.
- Each press gives a 30 seconds time span up to 4 minutes.

16 TRACKING/V-LOCK
For manual tracking adjustment
The + and − buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment
When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "−" button to reduce the noise bars.

For vertical locking adjustment
Use the + and − buttons to minimize any vertical jitter during still-picture playback.

17 INPUT SELECT
To select the "A1" or "A2" external recording source.

18 ZERO STOP
For the zero stop function.

19 FF (FAST FORWARD)
In the stop mode: To fast forward the tape.
In the playback mode: To search forward.
In the fast forward mode: To obtain high speed picture.
"⊳⊳" is lit.

20 STILL ADV
To advance a still picture during still playback.

21 TRANSMIT
To transmit the data that has been set on the remote controller to the VTR.

22 SCANNER ON/OFF
To turn the Bar Code Reader on and off.

23 Display

24 Infra-red Transmitter
The programming data are transmitted from here to the VTR.

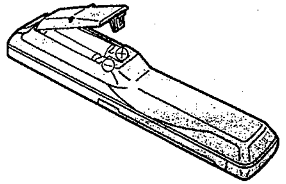
Power source for the remote controller

The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.
- If the display flickers when a button on the remote controller is pressed, please replace the batteries with new ones.

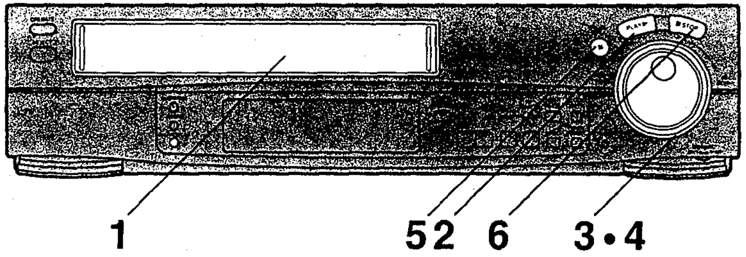
Precautions for battery replacement

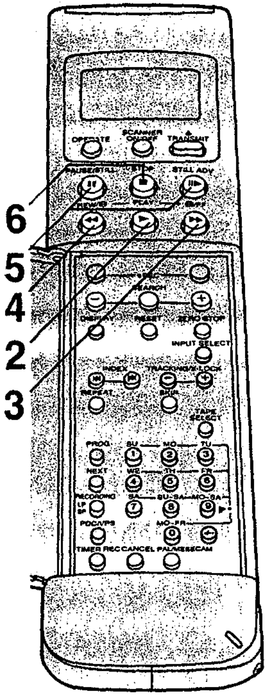
- Load the new batteries with their polarity (⊕ and ⊖) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

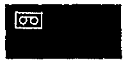
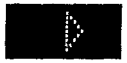
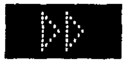
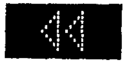
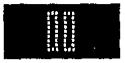
Loading the batteries



Playback


PLAY
STOP
1
5
2
6
3•4


6
5
4
2
3
OPERATE
TRANSMIT
PAUSE/STILL
STILL ADV
PLAY
SEARCH
RESET
ZERO STOP
INPUT SELECT
INDEX
REPEAT
SKIP
TAPE SELECT
PROG.
NEXT
TIMER REC
CANCEL
PAL/MESECAM

Operations	Display Symbols	
1		Insert a recorded cassette tape.
2 PLAY		Start viewing the picture.
3 ⊡/FF		Search forward by tapping **FF**. • To change back to normal playback, press **PLAY**.
4 REW/⊡		Search backward by tapping **REW**. • To change back to normal playback, press **PLAY**.
5 PAUSE/STILL ↓ STILL ADV		View a still picture. • To advance one frame of the still picture, press **STILL ADV**. • To continue the normal playback, press **PLAY** or **PAUSE/STILL**.
6 STOP		Stop viewing the picture.

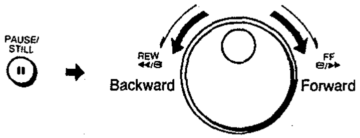
Other Playback Functions

To change the playback speed

Using Shuttle Ring:

1 Press **PAUSE/STILL**.

2 Rotate Shuttle Ring.


PAUSE/STILL
REW
Backward
FF
Forward

Using Remote Controller:

1 Press **SEARCH**.

2 Press + or − repeatedly.
+: To increase the playback speed forward
−: To increase the playback speed backward

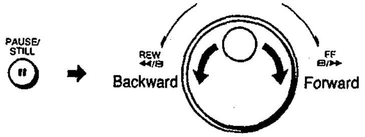
SEARCH

⊖—○—⊕

To locate the desired picture exactly

1 Press **PAUSE/STILL**.

2 Turn Jog Dial.


PAUSE/STILL
REW
Backward
FF
Forward

To obtain high speed picture during fast forward or rewind

Keep **FF** pressed during fast forward.
Keep **REW** pressed during rewind.

⊡/FF REW/⊡

- The same operation can also be performed by turning the Shuttle Ring.

To skip scene

Press **SKIP** during playback.

SKIP

- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To return to a specified scene

1 Press **RESET** to set the counter to 0:00.00.

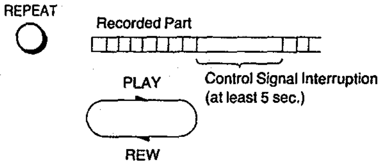
2 After playback, press **ZERO STOP** in the stop mode.

RESET ZERO STOP

- The tape will be rewound or fast forwarded to 0:00.00.

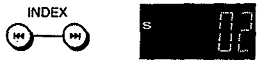
To playback a recorded part repeatedly

Press **REPEAT** in the stop mode.


REPEAT
Recorded Part
PLAY
Control Signal Interruption (at least 5 sec.)
REW

To find the beginning of each recording

For example:
Searching for the 2nd recorded segment in the forward direction.
Press **INDEX ▶▶|** twice.



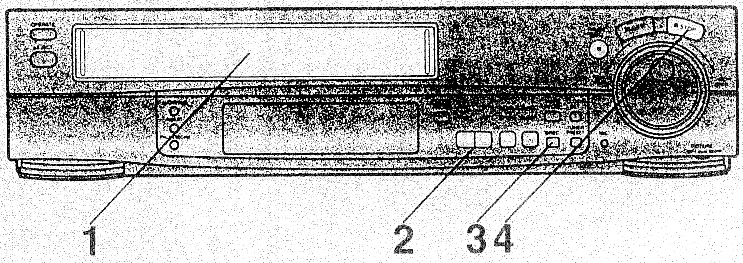
- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX |◀◀**.
- Up to 20 programmes can be searched for in both directions.

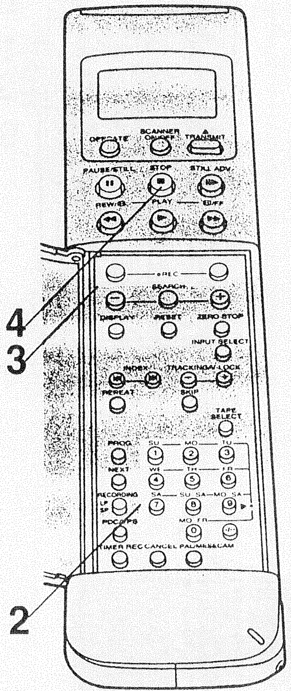
Recording Index Signals

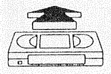
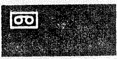
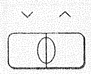
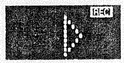
Index signals are recorded in following cases.
WRITE indicator appears on the Display.
- When a recording is started by pressing **REC**.
- When **REC** is pressed during recording.
- When timer recording is activated.

Notes:
- During Playback, set **PAL/MESECAM**.
  - PAL: When playing back a tape recorded in the PAL system.
  - MESECAM: When playing back a tape recorded in the MESECAM system. MESECAM indicator lights up.
- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.

On-the-spot Recording

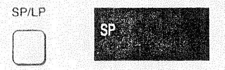




Operations	Display Symbols	
1 		Insert a cassette tape. •If it has already been inserted, press **OPERATE** to turn the VTR on.
2 		Select TV station.
3		Start recording.
4		Stop recording.

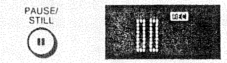
To select the desired tape speed

Press **SP/LP** before recording.



To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.



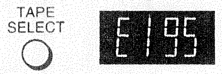
To record one TV programme while viewing another programme

1 Refer to the on-the-spot recording operations steps 1 to 3.

2 Select the TV programme on your TV set you wish to view at the present time.

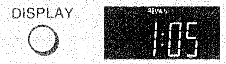
To display the approximate remaining tape time

1 Press **TAPE SELECT** to select the corresponding cassette tape length.



E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

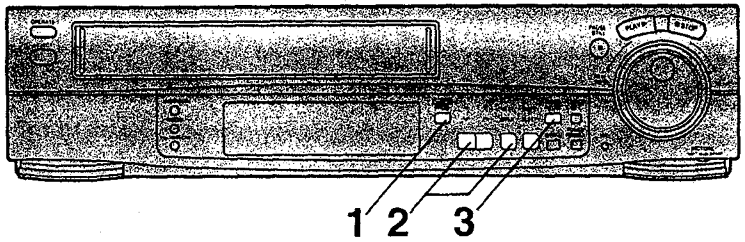
2 Press **DISPLAY**.



Notes:

- •When a video cassette with a broken off tab is inserted, the "▭" indication will flash to indicate that recording is not possible.
- •The recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.

Timer Recording



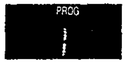
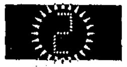
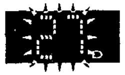
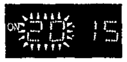
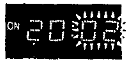
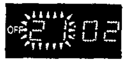
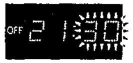
Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including daily and weekly programmes.

Preparation

Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer programme number;	1
Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30
(present date; 16th October)	

	Operations	Display Symbols	
1	CHECK PROG		Select **Timer programme number** "1".
2	Set each item by pressing + or − and **NEXT**.		
	− +		Set **Programme position** (channel) "2".
			Set **Date** "27". • For daily and weekly recording, see next page.
			Set **Starting time** (hour) "20".
	↓		Set **Starting time** (minute) "02".
	NEXT		Set **Ending time** (hour) "21".
			Set **Ending time** (minute) "30". • There is no need to press **NEXT**.
3	TIMER REC		To activate timer recording, press **TIMER REC**.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press − repeatedly until the desired day(days) is displayed.

Daily recording From Sundy to Saturday	SU MO TU WE TH FR SA
From Monday to Saturday	MO TU WE TH FR SA
From Monday to Friday	MO TU WE TH FR
Weekly recording For example, Sunday	SU

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV Socket or the Audio/Video input sockets, select the A1 or A2 indicator for the programme position.

A1: Through the Euro AV socket (AV1)
A2: Through the Audio/Video input sockets (AV2)

Selecting the Desired Tape Speed

After step 2, press **NEXT** and select SP or LP by pressing + or −.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing **CHECK/PROG**.

Cancelling a Timer Programme

1 Release from the standby mode by pressing **TIMER REC**.

2 Select the timer programme number to be canceled by pressing **CHECK/PROG**.

3 Press + and − simultaneously for more than 3 seconds.

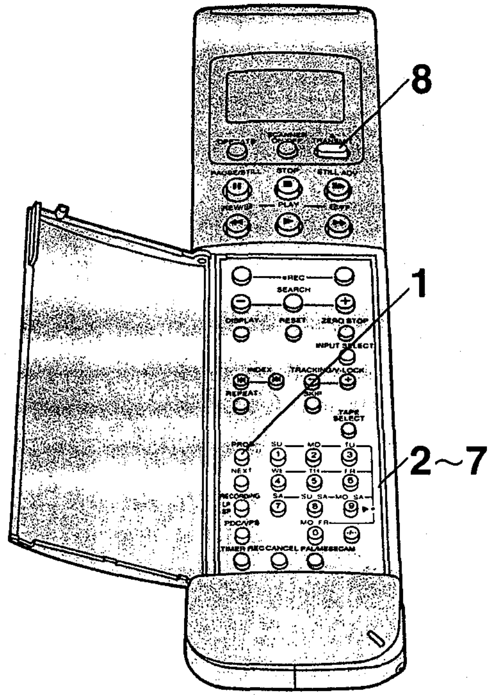
VPS (Video Programme System)/PDC (Programme Delivery Control)

The Video Programme System (VPS) or the Programme Delivery Control (PDC) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

- Press **SHIFT** in step 2 to cancel the VPS (PDC) function.
- If the actual broadcasting times of timer recordings overlap [regardless of whether they are VPS (PDC)-controlled], the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the VPS (PDC) signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular VPS (PDC) signal, the timer recording will be performed in the normal mode (without VPS/PDC) even if it was programmed for VPS (PDC). In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.
- Model NV-SD40EO is not equipped with VPS (PDC) function. The VPS (PDC) function becomes operative when the VTR is equipped with the optional VPS (PDC) decoder. Consult your authorized video dealer.

Note:
If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. two days later.
However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

Using the Remote Controller


8
1
2~7
REC
SEARCH
DISPLAY
RESET
ZERO STOP
INPUT SELECT
INDEX
TRACKING/V-LOCK
REPEAT
SKIP
TAPE SELECT
PROG
NEXT
RECORDING LP SP
PDC/VPS
TIMER REC
CANCEL
PAL/MESECAM
STOP
PLAY
SU
MO
TU
WE
TH
FR
SA
MO FR

For Example:

Programme position (channel);	27
Date;	3rd, November
Starting time;	20:02
Ending time;	21:30

(Present date; 16th, October)

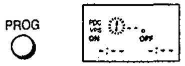
Note:
If no operation is performed on the remote controller for more than 60 seconds, the Display turns off.

Preparation

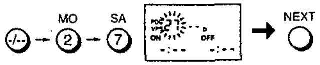
Insert a cassette tape with an intact erasure prevention tab.

Operations

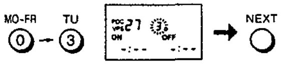
1 Press **PROG**.


PROG
PDC VPS ON
OFF

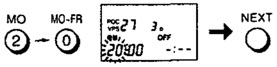
2 Enter **Programme position** "27", then press **NEXT**.


MO
SA
-/--
2
7
27
NEXT

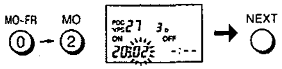
3 Enter **Date** "3", then press **NEXT**.


MO-FR
TU
0
3
27
3
NEXT

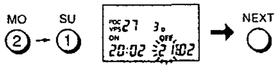
4 Enter **Starting time** (hour) "20", then press **NEXT**.


MO
MO-FR
2
0
27
3
20:00
NEXT

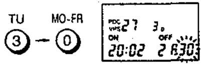
5 Enter **Starting time** (minute) "02", then press **NEXT**.


MO-FR
MO
0
2
27
3
20:02
NEXT

6 Enter **Ending time** (hour) "21", then press **NEXT**.


MO
SU
2
1
27
3
20:02
21:02
NEXT

7 Enter **Ending time** (minute) "30".


TU
MO-FR
3
0
27
3
20:02
21:30

8 Press **TRANSMIT**.

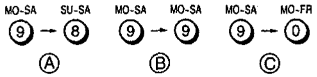
The transmitted data appears on the display of the VTR and a repeated bleep confirms the reception.

Daily Timer Recording

For this timer function, several groups of days can be selected.

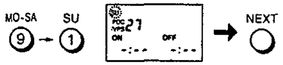
Ⓐ Daily recording from Sunday to Saturday
Ⓑ Daily recording from Monday to Saturday
Ⓒ Daily recording from Monday to Friday

Press the following numeric button within 5 seconds to select the group of days in step 3.


MO-SA
SU-SA
9
8
Ⓐ
MO-SA
MO-SA
9
9
Ⓑ
MO-SA
MO-FR
9
0
Ⓒ

Weekly Timer Recording

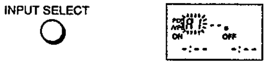
Press the 9 button and then the numeric button within 5 seconds in step 3.
For example, SU (Sunday)


MO-SA
SU
9
1
27
NEXT

Timer Recording from External Signal Source

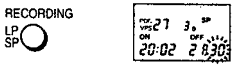
If Timer Recording is performed by a unit connected to the Euro AV socket, press **INPUT SELECT** to select the A1 indicator for the programme position.

- A2 cannot be selected.


INPUT SELECT
A1

Selecting the Desired Tape Speed

Press **RECORDING SP/LP** in any of steps 2~7.


RECORDING
LP
SP
27
3
SP
20:02
21:30

Turning VPS (PDC) function on and off

Press **PDC/VPS** in any of steps 2~7.

Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "⌚" is lit.
- Make sure that the display of the Remote Controller is not on.

Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

Cancelling a Timer Programme

1 Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

2 Press **CANCEL**.

Editing

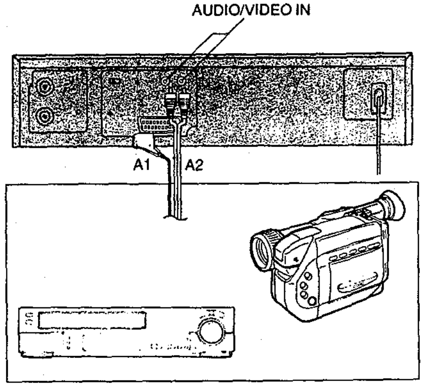
Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

This enables you to record a new segment immediately after a previously recorded segment.

Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.
  A1: Through Euro AV socket (AV1)
  A2: Through Audio/Video input sockets (AV2)
- Set **PAL/MESECAM** according to the colour TV system of the video source.
  PAL: When receiving PAL signals
  MESECAM: When receiving SECAM signals
  The MESECAM Indicator lights up.



Operations

1 Press **PAUSE/STILL**.

PAUSE/STILL

2 Search for the end of the previous recording.

3 Set for the new recording by pressing **REC**.

●REC

4 Start the new recording by pressing **PAUSE/STILL** again.

PAUSE/STILL

Synchronized Editing

It is possible to synchronize the playback start and stop of the Movie Camera with the recording start and stop of this VTR.

- Connect a Movie Camera to this VTR with Synchro Connection Cord (optional).

1 Put the VTR in the recording pause mode by pressing **REC** and **PAUSE/STILL**.

2 Put the Movie Camera in the still palyback mode at the point where you want to start editing.

3 Press **PAUSE/STILL** on the VTR.
- The Movie Camera changes over to the playback mode and the dubbing will start automatically.

Synchronized Editing between the VTRs

When editing from another VTR equipped with Synchro Edit Socket, synchronized start and stop of both VTRs can be activated from this VTR.

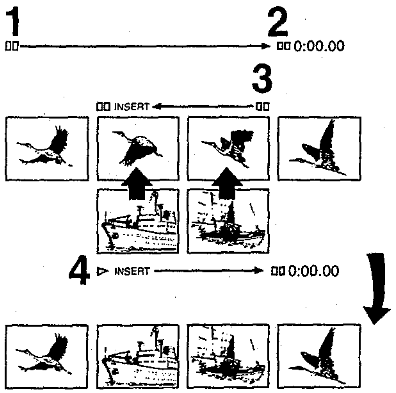
The operation is the same as described for synchronized editing from a Movie Camera.

Insert Editing

This editing method allows a new recorded segment to be inserted into an existing recording to replace an existing segment of the same length.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.



Operations		Display Symbols	
1	PAUSE/STILL		Press **PAUSE/STILL**.
2	RESET		Search for the Edit out (ending) point, and set the counter to 0:00.00 by pressing **RESET**.
3	INSERT		Search for the Edit in (starting) point, and press **INSERT**. • If you want to replace the sound too, press **AUDIO DUB** as well.
4	PAUSE/STILL		Start insert editing by pressing **PAUSE/STILL**. • The insert editing will finish when the counter reaches 0:00.00.

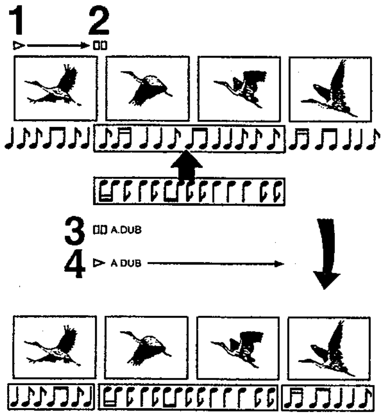
Note:
Insert Editing cannot be used on blank sections of a tape. In this case use Assembly Editing first.

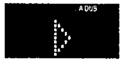
Audio Dubbing

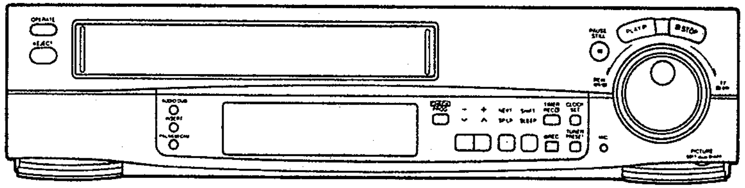
This enables you to record new sound on a previously recorded tape.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.



Operations		Display Symbols	
1	PLAY		Search for the starting point for audio dubbing.
2	PAUSE/ STILL		Press **PAUSE/STILL** at the starting point.
3	AUDIO DUB		Set for audio dubbing by pressing **AUDIO DUB**.
4	PAUSE/ STILL		Start recording the new sound by pressing **PAUSE/STILL**. • Stop recording by pressing **STOP**.



Automatic VTR off at time setting

Press **SLEEP** for the desired time.

SLEEP
OFF
0:30

- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press **SLEEP** repeatedly to set 0:00.

NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

Other Automatic Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

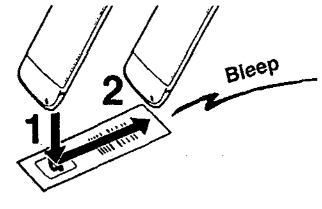
Bar Code Operation

Scanner Preparation

Operating the Remote Controller

Press **SCANNER ON/OFF** to turn it on.
If the remote controller is not operated within 60 seconds (within 4 minutes when setting the clock time), the lamp and Display turns off.

How to use the Scanner



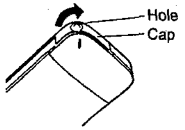
When the Bar Codes Cannot be Read

Although the lamp in the tip of the Bar Code Reading Section lights up:

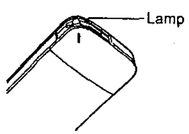
- No figures appear in the Display
- No bleep sounds is heard;

The tip of the Bar Code Reading Section is probably clogged with dirt.

1 Remove the cap.



2 Gently wipe the tip of the lamp with a soft cloth.



Setting the Clock

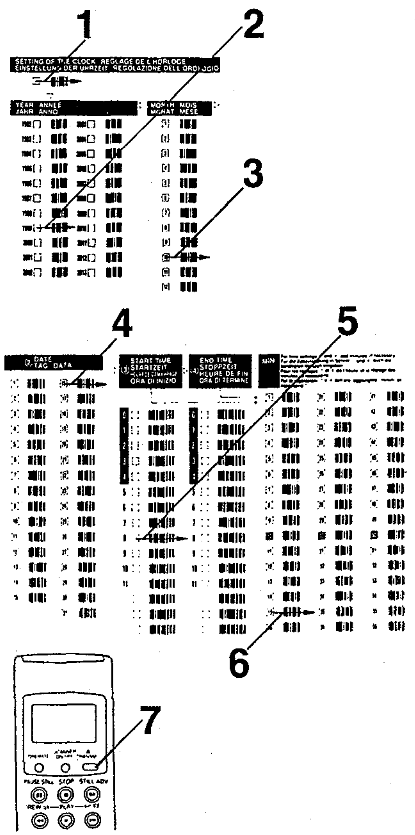
Read in the following data successively by tracing bar codes 1 to 6 on the programming sheet.

Preparation

Turn on the VTR and the remote controller.

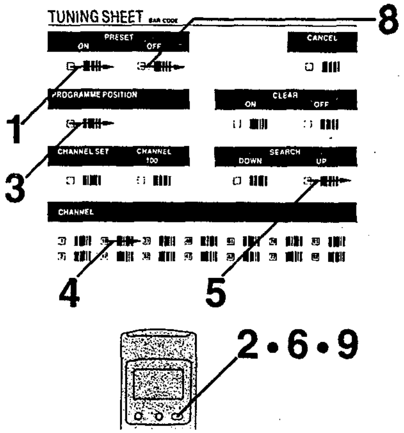
For Example:

Date; 16th, October 1999
Time; 8:15



Storing TV Broadcasts

Read in the required data successively by tracing the bar codes on page 99.



Preparation

Turn on the VTR and the Remote Controller.

Operations

1 Trace the bar code "PRESET ON".
- If no operations are performed within more than 4 minutes, the Digital Scanner will automatically turn itself off.

2 Press **TRANSMIT** to transmit to the VTR.

3 Trace the bar code "PROGRAMME POSITION".

4 Trace the bar code for the programme position (channel) that you want to tune to a station.

5 Trace the bar code "SEARCH UP" or "SEARCH DOWN".

6 Press **TRANSMIT** to transmit to the VTR.
- The channel will be tuned automatically.
- At every push of the button, the next channel will be tuned.

7 Press **PAL/MESECAM** to select SECAM system so that MESECAM indicator is lit on the VTR Display.

8 Trace the bar code "PRESET OFF".

9 Press **TRANSMIT**.

Notes:

- If you make a mistake in the above operation steps, trace the bar code "CANCEL" and start again from step 4.
- When setting more than 2 channels, repeat the steps 3–7 above.

Setting the Tuner Directly

Perform the operation steps 1–4.

5 Trace the bar code "CHANNEL SET".

6 Trace the number of the channel for the TV station that you want to tune.
- When tuning a TV station in the hyperband, trace the bar code "CHANNEL 100~" and then trace the bar code "CHANNEL".

Press **TRANSMIT** to transmit to the VTR.

Perform the operation steps 7–9.

If you want to tune further TV stations, repeat the steps 3 to 7.

Blanking of Unoccupied Programme Positions

Perform the operation steps 1–3.

4 Trace the bar code for the programme position that you want to blank so that it will be skipped during Up/Down selection of the programme position.

5 Trace the bar code "CLEAR ON".

6 Press **TRANSMIT** to transmit to the VTR.

7 Trace the bar code "PRESET OFF".

8 Press **TRANSMIT**.

Cancelling the Clear Function (Blanking)

Perform the operation steps 1–3 above.

4 Trace the bar code for the programme position that has been blanked until now.

5 Trace the bar code "CLEAR OFF".

Perform the operation steps 6–8 above.

- To programme a timer recording or the set the clock time immediately after setting the tuner in the VTR by using the Remote Controller, first press **SCANNER ON/OFF** on the Remote Controller to turn it off, before starting the above operation.

Timer Recording

Successively scan the data for the programme position (channel), day, starting time and ending time by tracing bar codes 1 to 6 on the programming sheet.

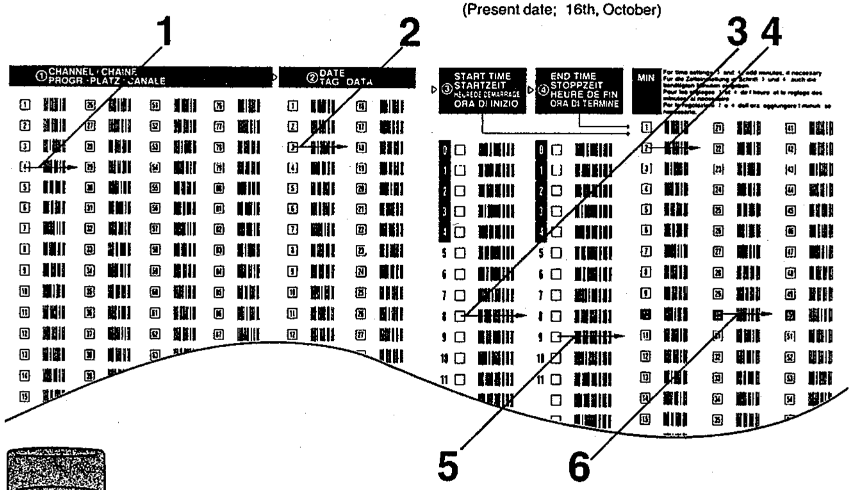
Preparation

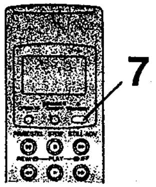
Turn on the VTR and the remote controller.

For Example:

Programme position (channel);	4
Date;	3rd, November
Starting time;	8:02
Ending time;	9:30

(Present date; 16th, October)


1
2
3 4
5
6
①CHANNEL·CHAINE PROGR.-PLATZ·CANALE
②DATE TAG DATA
START TIME ③STARTZEIT HEURE DE DEMARRAGE ORA DI INIZIO
END TIME ④STOPPZEIT HEURE DE FIN ORA DI TERMINE
MIN

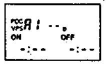


Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV socket, the AV1 bar code in the CHANNEL column must be traced in the step 1.

- AV2 cannot be selected.

AV1



Daily and Weekly Timer Recording

In the step 2, trace the bar code for:

Daily

Sunday to Saturday (SU~SA) ☐

Monday to Friday (MO~FR) ☐

Monday to Saturday (MO~SA) ☐

Weekly

For example;
Sunday

EVERYWEEK
WÖCHENTLICH
HEBDOMADAIRE
SETTIMANALE

SU

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2–1–1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

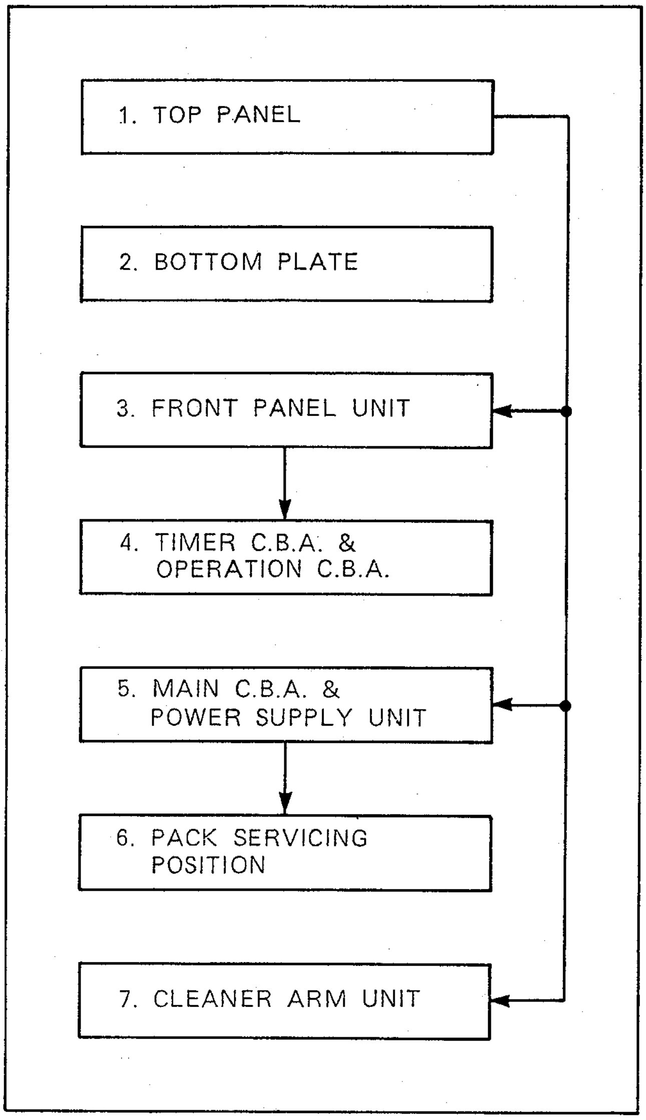

1. TOP PANEL
2. BOTTOM PLATE
3. FRONT PANEL UNIT
4. TIMER C.B.A. & OPERATION C.B.A.
5. MAIN C.B.A. & POWER SUPPLY UNIT
6. PACK SERVICING POSITION
7. CLEANER ARM UNIT

Fig. D1

2–1–2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Removal.....2 Screws(A) (NV–SD30EO/EV)
Removal.....4 Screws(A) (NV–SD40EO/EV)

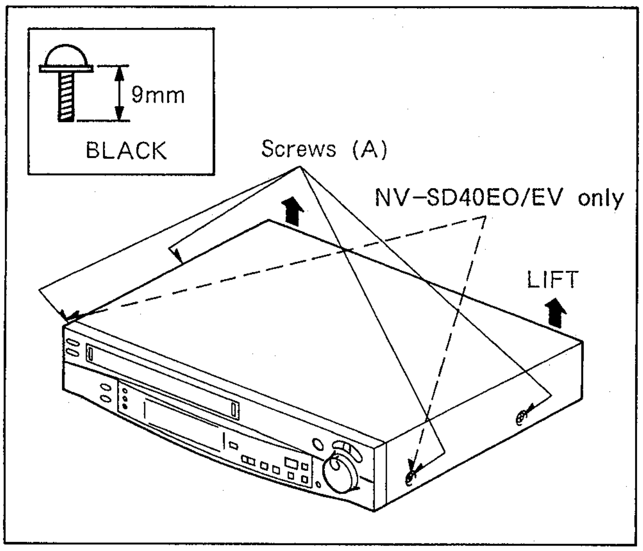

9mm
BLACK
Screws (A)
NV–SD40EO/EV only
LIFT

Fig. D2

2. REMOVAL OF THE BOTTOM PLATE

Remove.....6 Screws(B)

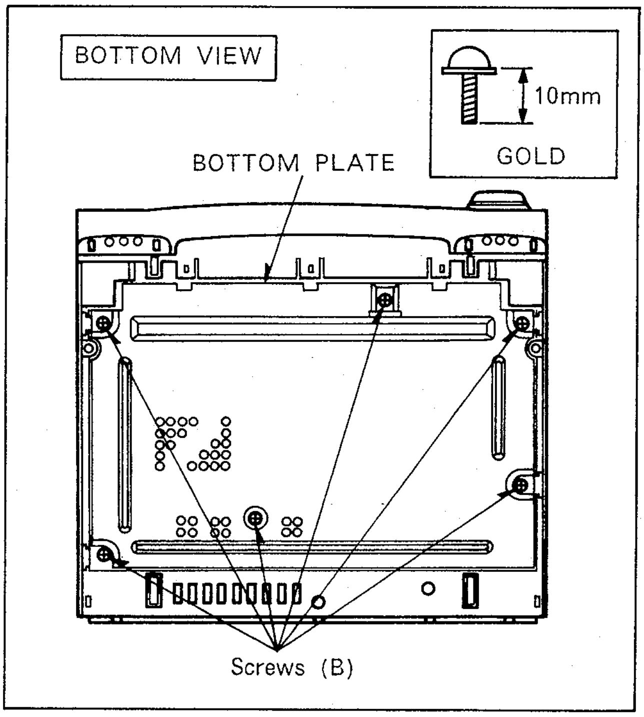

BOTTOM VIEW
10mm
GOLD
BOTTOM PLATE
Screws (B)

Fig. D3

3. REMOVAL OF THE FRONT PANEL UNIT

Pull OUT.....Jog/Shuttle Dial
Remove.....Screw(C)
Unlock.....6 Tabs(D)

CAUTION:
Confirm that the Jog/Shuttle Dial is pulled out before removeing the Front Panel Unit.

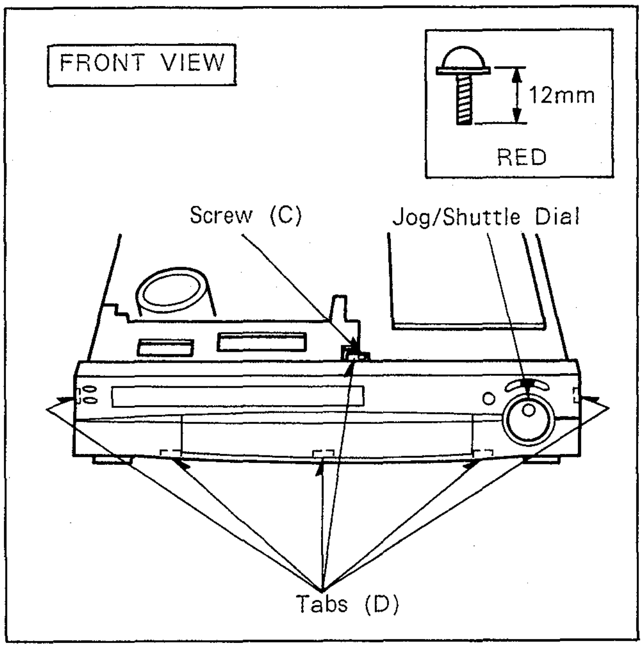

FRONT VIEW
12mm
RED
Screw (C)
Jog/Shuttle Dial
Tabs (D)

Fig. D4

4. REMOVAL OF THE TIMER C.B.A. & OPERATION C.B.A.

REMOVAL OF THE TIMER C.B.A.

Disconnect.....Connector(E)
Unlock.....6 Tabs(F)

REMOVAL OF THE OPERATION C.B.A. (NV-SD40EO/EV only)

Disconnect.....Connector(E)
Unlock.....2 Tabs(G)

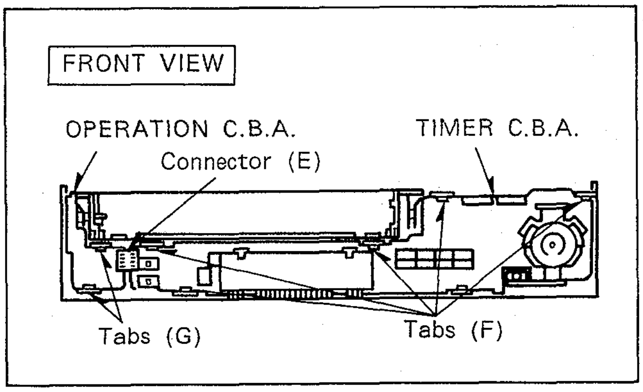

FRONT VIEW
OPERATION C.B.A.
TIMER C.B.A.
Connector (E)
Tabs (G)
Tabs (F)

Fig. D5

5. REMOVAL OF THE MAIN C.B.A. & POWER SUPPLY UNIT

REMOVAL OF THE MAIN C.B.A.

Remove.....4 Screws(H),(I)
Unlock.....4 Tabs(J)

REMOVAL OF THE POWER SUPPLY UNIT

Remove.....2 Screws(H),(K)

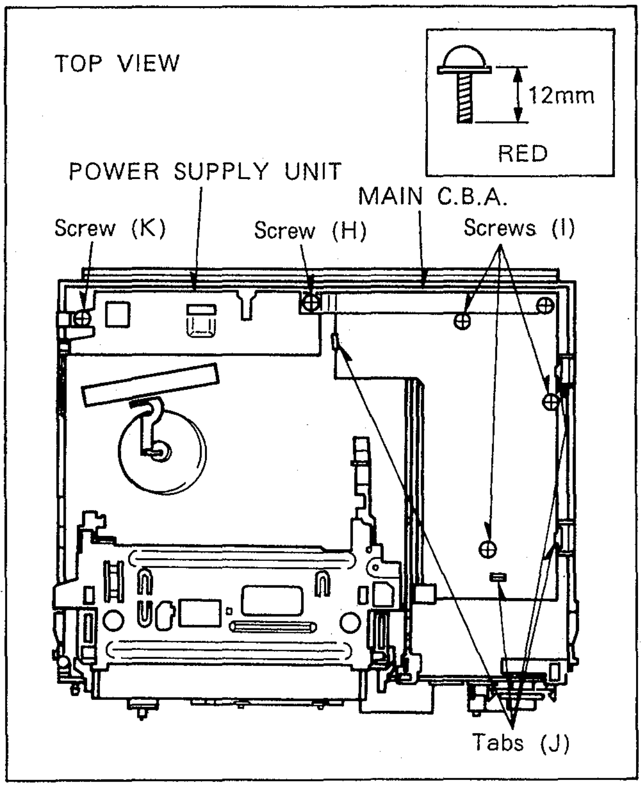

TOP VIEW
12mm
RED
POWER SUPPLY UNIT
MAIN C.B.A.
Screw (K)
Screw (H)
Screws (I)
Tabs (J)

Fig. D6

6. PACK SERVICING POSITION

CAUTION:
Confirm that there is insulation between Mechanical Chassis and Main C.B.A. before connecting Mains AC.

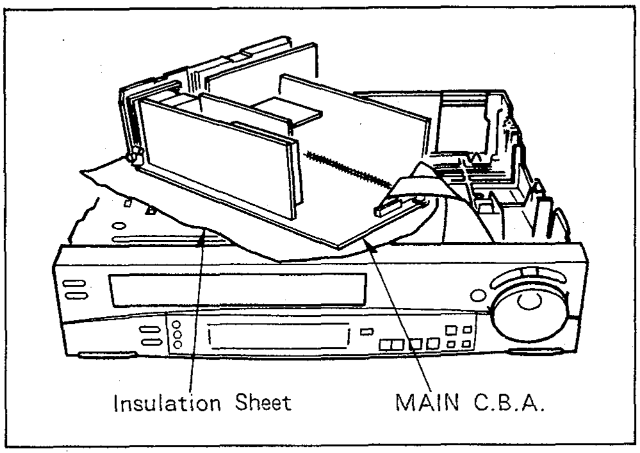

Insulation Sheet
MAIN C.B.A.

Fig. D7

7. REMOVAL OF THE CLEANER ARM UNIT

1. Unlock the locking portion(L).
2. Pull up the Cleaner Arm Unit.

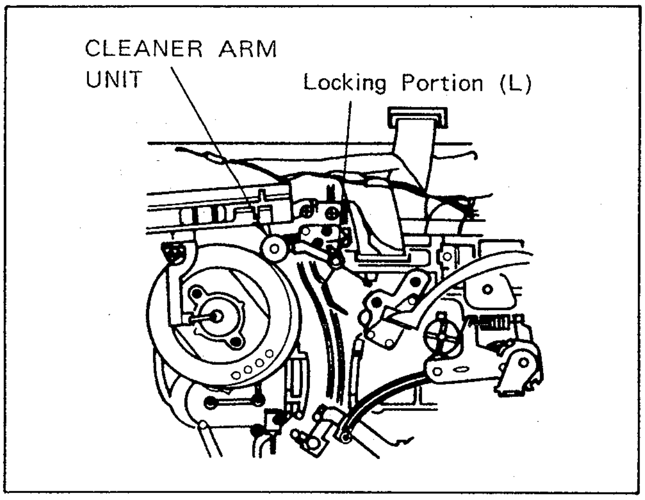


Fig. D8

2-2. MECHANICAL ADJUSTMENT PROCEDURES

2-2-1. TENSION POST POSITION ADJUSTMENT

(Equipment Required)
Hex Wrench (VFK0326)

1. Disconnect the AC plug.
2. Remove the TOP PLATE and CASSETTE HOLDER.
3. Turn the LOADING MOTOR until the loading completes.
4. Adjust the hole of TENSION BAND FASTENER by hex wrench so that the left edge of IMPEDANCE ROLLER and TENSION ARM UNIT as shown in Fig.M1.

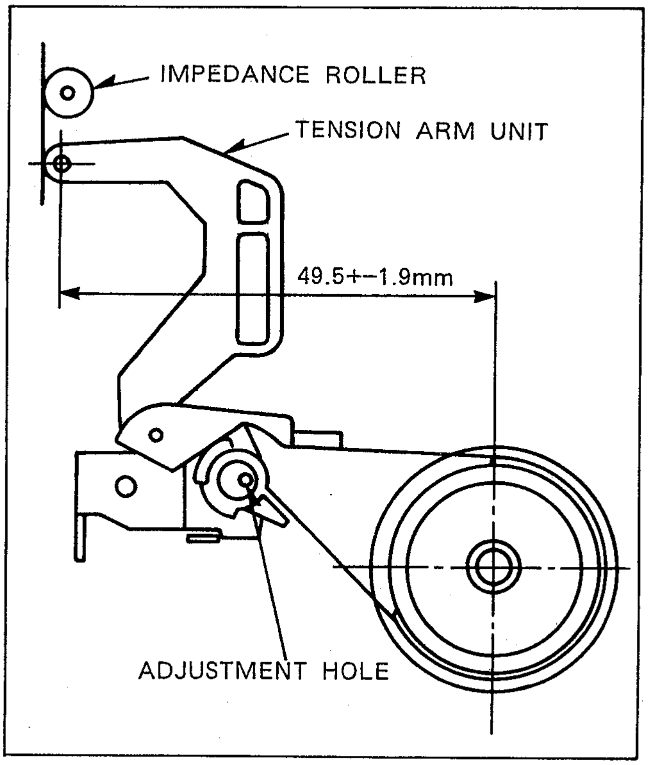


Fig. M1

2-2-2. BACK TENSION ADJUSTMENT

(Equipment Required)
Back Tension Meter (VFK0132)
VHS Cassette Tape (180 minutes tape:PAL)
(120 minutes tape:NTSC)

(Specification)
22.5–27.5g

1. Playback the cassette tape from the beginning and wait until the tape movement get the stabilization.
(for approx. 10~20 seconds)
2. Insert the Back tension Meter into the path of a tape, and measure the back tension to be within specification as shown in Fig.M2.

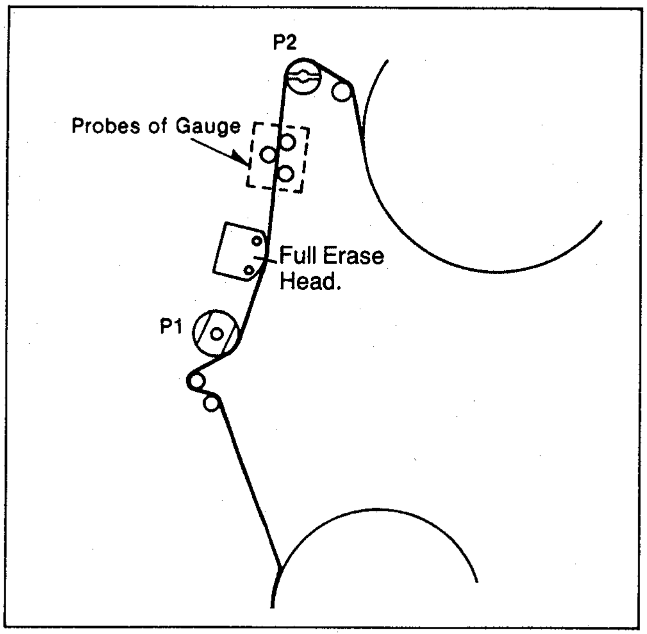

P2
Probes of Gauge
Full Erase Head.
P1

Fig. M2

3. If it is out of specification, change the spring notch as shown in Fig.M3.

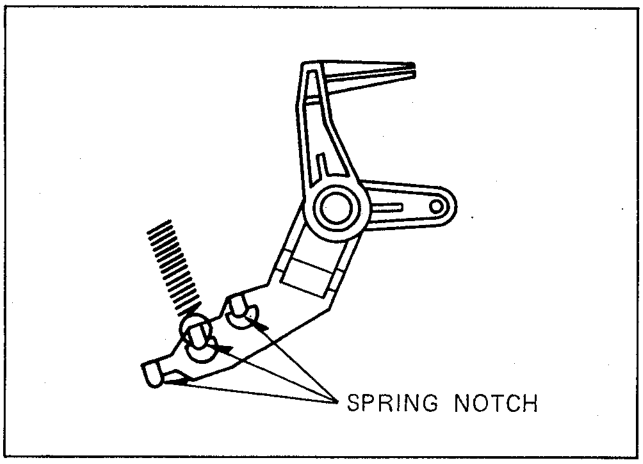

SPRING NOTCH

Fig. M3

2–2–3. P2 AND P3 POSTS ADJUSTMENT (PREADJUSTMENT)

(Equipment Required)
Post Adjustment Screwdriver (VFK0329)

1. Remove the TOP PLATE and CASSETTE HOLDER.
2. Turn the LOADING MOTOR until the unloading completes.
3. Loosen the fixing screw of P2 and P3 POSTS.
4. Rotate the P2 and P3 POSTS clockwise to the end.
5. Rotate the P2 and P3 POSTS twice counterclockwise.

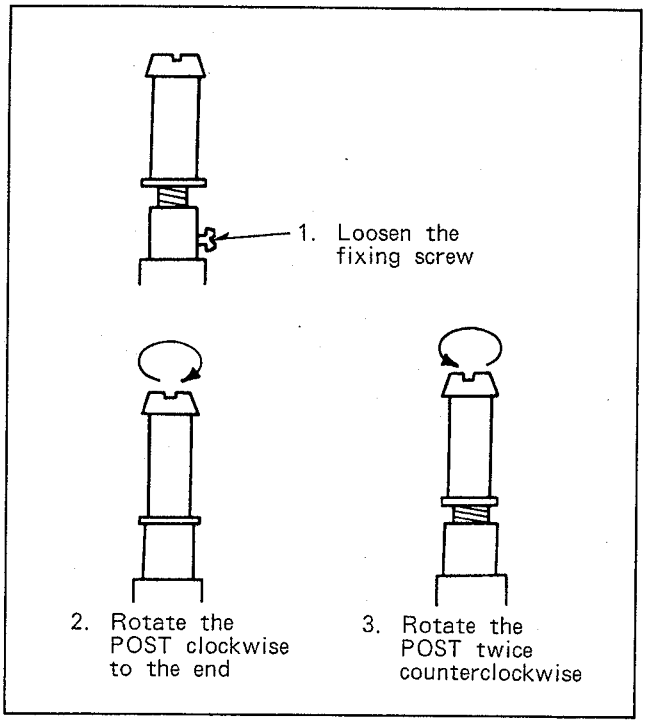

1. Loosen the fixing screw
2. Rotate the POST clockwise to the end
3. Rotate the POST twice counterclockwise

Fig. M4

6. Install the TOP PLATE and CASSETTE HOLDER
7. Playback the cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the P1, P2, P3 and P4 POSTS as shown in Fig.M5.

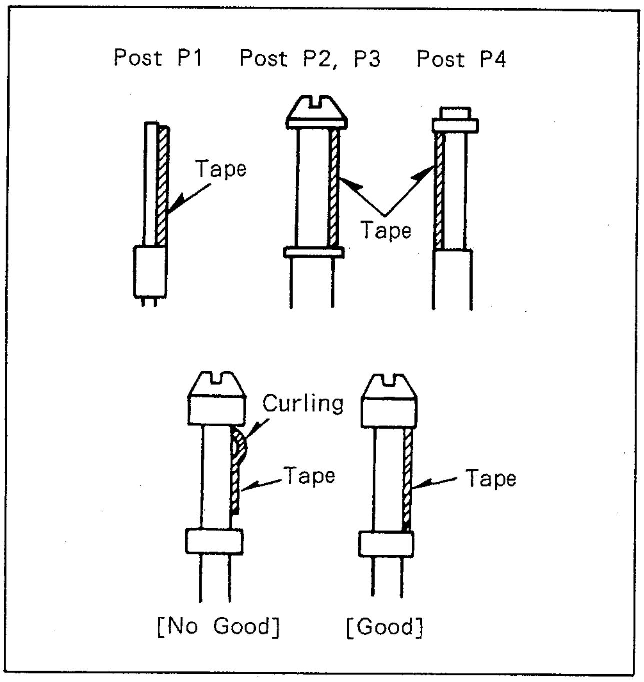

Post P1
Post P2, P3
Post P4
Tape
Tape
Curling
Tape
Tape
[No Good]
[Good]

Fig. M5

8. If curling appears, readjusts the P2 and P3 POSTS.

2-2-4. TAPE INTERCHANGEABILITY ADJUSTMENT

Carry out the following procedures for Tape interchangeability Adjustment to do it correctly and smoothly.

(1) Adjustment of P2 and P3 Posts.
(2) Height Adjustment of A/C Head (1).
(3) Height Adjustment of A/C Head (2).
(4) Fine-Adjustment of A/C Head
(5) Horizontal Position Adjustment of A/C Head.

If the Tape Interchangeability Adjustment is not perfect, repeat the above procedures from (1) to (5).

CAUTIONS:
To mark a Adjustment Mode for Tape Interchangeability, connect a Cut Jumper Wire as shown in Fig.M6.
(Auto Tracking is turned off.)
After finishing the adjustment, disconnect the Cut Jumper Wire.

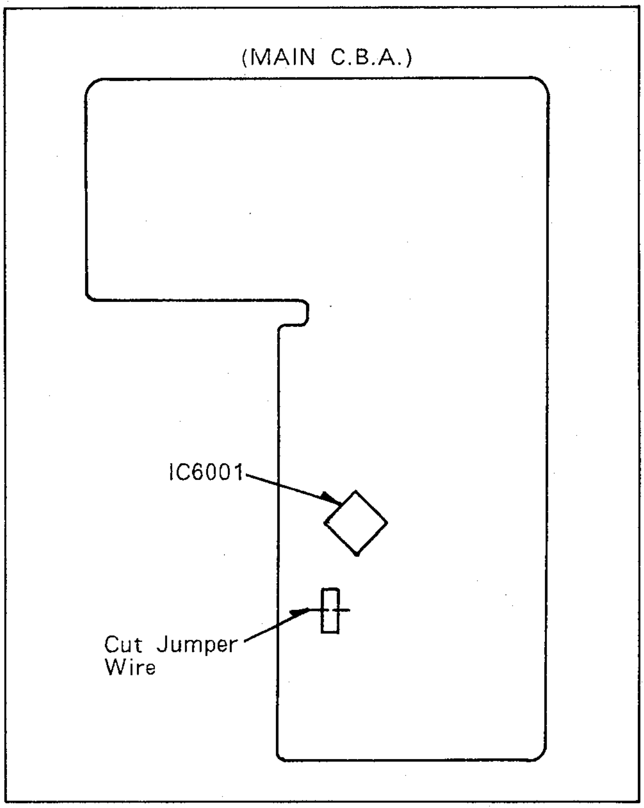

(MAIN C.B.A.)
IC6001
Cut Jumper Wire

Fig. M6

(1) Adjustment of P2 and P3 Posts

(Equipment Required)
Alignment Tape(PAL/SECAM: VFJ8125H3F,
NTSC: VFM8080HQFP)
Post Adjustment Screwdriver (VFK0329)

1. Set the tracking control into the fix position. (by pressing the tracking (+) and (−) button simultaneously on the Remote Controller)
   And connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.

Note:
To get a stable waveform of the Head Amp output on the oscilloscope, use the head switching pulse as a triggering signal as shown in Fig.M7.

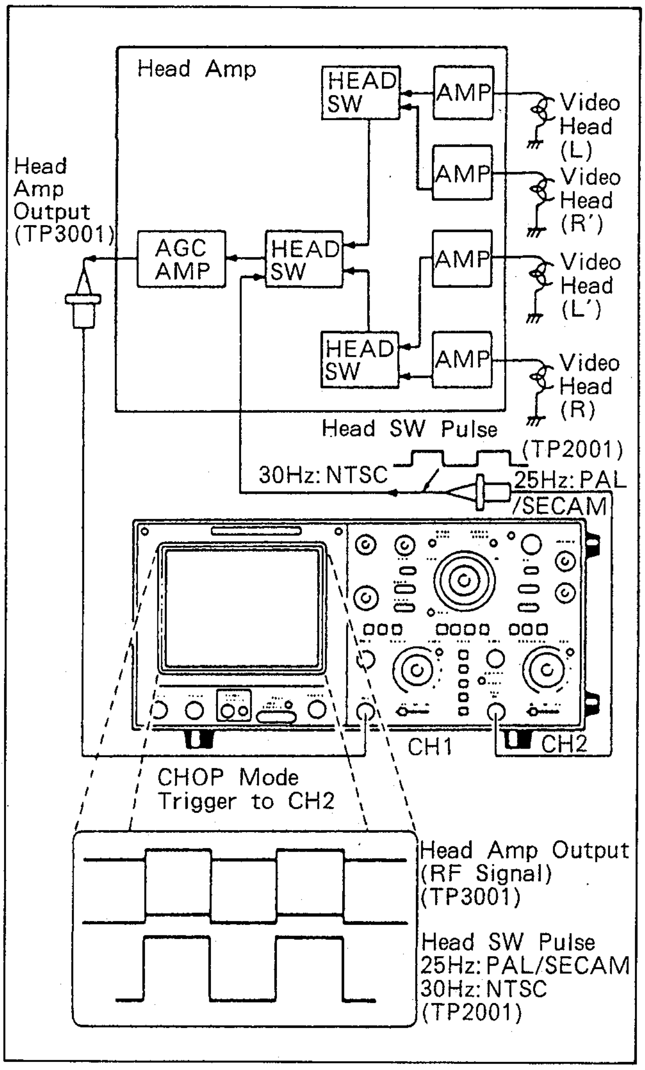

Head Amp
HEAD SW
AMP
AMP
AMP
AMP
Video Head (L)
Video Head (R')
Video Head (L')
Video Head (R)
Head Amp Output (TP3001)
AGC AMP
HEAD SW
HEAD SW
Head SW Pulse
(TP2001)
30Hz: NTSC
25Hz: PAL /SECAM
CH1
CH2
CHOP Mode
Trigger to CH2
Head Amp Output (RF Signal) (TP3001)
Head SW Pulse
25Hz: PAL/SECAM
30Hz: NTSC
(TP2001)

Fig. M7 Connect of Oscilloscope

2. Playback the alignment tape.
3. If the RF envelope appears like example "A" or "B" in Fig.M8 then adjustment of the tape guide post (P2: Entrance) is necessary.
4. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig.M8–"C".

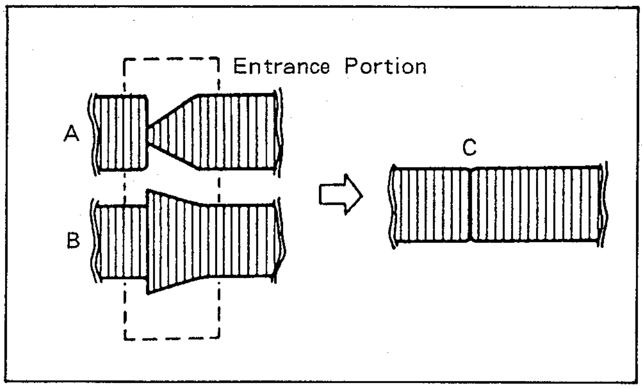

Entrance Portion
A
B
C

Fig. M8

5. If the RF envelope appears like example "D" or "E" in Fig.M9, then adjustment of the tape guide post (P3: Exit) is necessary.
6. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Fig.M9–"F".

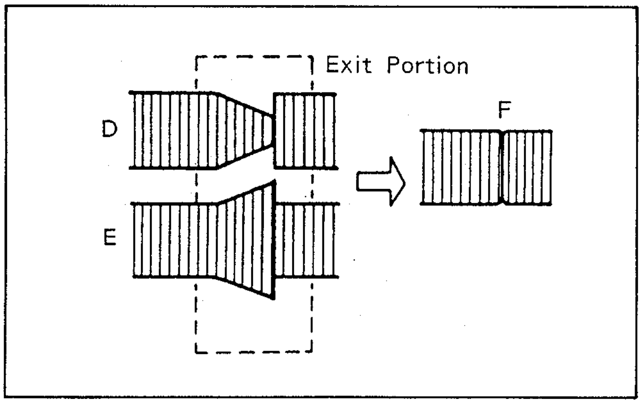

Exit Portion
D
E
F

Fig. M9

7. Turn the Tracking VR fully clockwise and counter clockwise. (Keep pressing + button or – button on the Remote Controller) The output envelope should vary nearly parallel with other condition as shown in Fig.M10.
8. Set the tracking control into centre fix position and adjust for maximum RF envelope, whilst being as flat as possible.

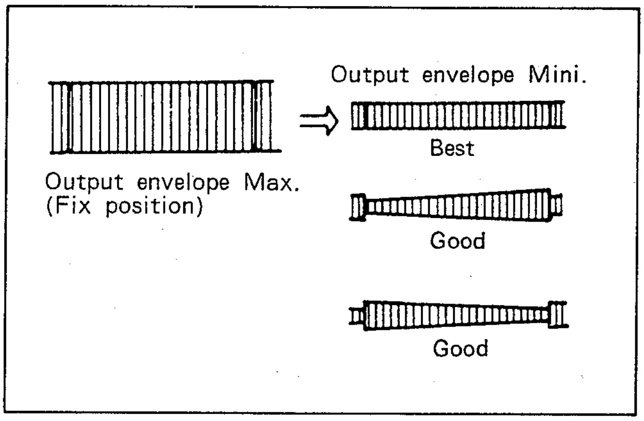

Output envelope Mini.
Output envelope Max.
(Fix position)
Best
Good
Good

Fig. M10

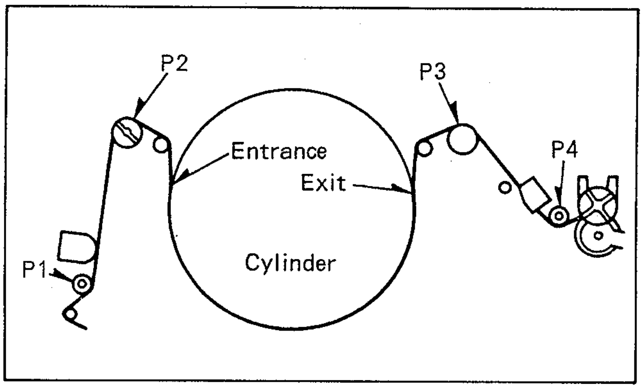

P2
P3
P4
P1
Entrance
Exit
Cylinder

Fig. M11 Loading of Posts

(2) Height Adjustment of A/C Head (1)

1) Install the A/C HEAD on the A/C HEAD BASE(E) by 3 screws (A),(B) and (C) with springs.
2) Tighten the screw (A) unit it touches chassis and then rotate the SCREW (A) counterclockwise for approx. 1.5 times.
3) Rotate the 2 screws(B) and (C) until A/C HEAD BASE(D) and (E) is separate.

CAUTION:
When adjusting the Screws (B) and (C) on the A/C HEAD BASE(E), do not touch the Screw Driver to the face of the A/C HEAD.

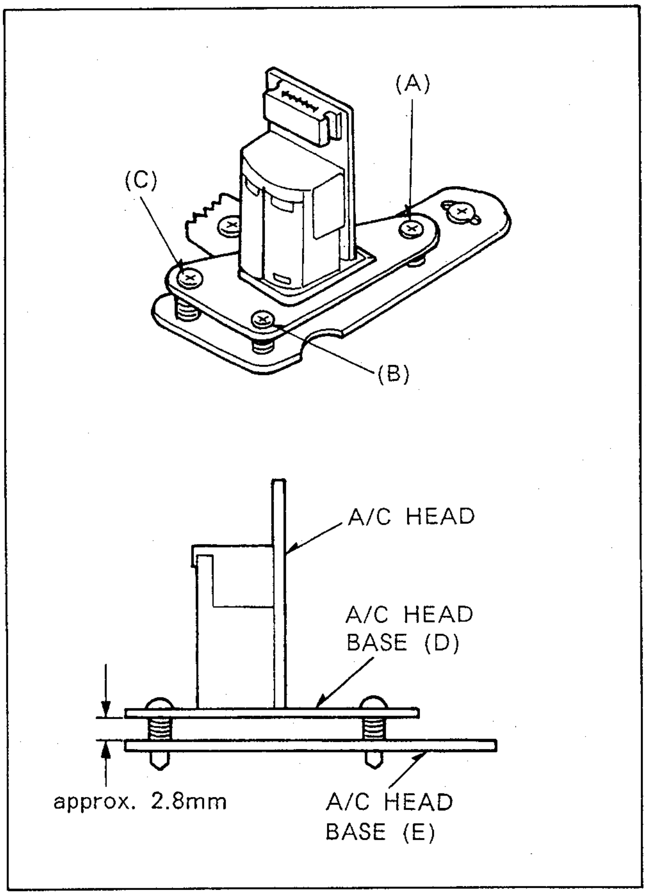
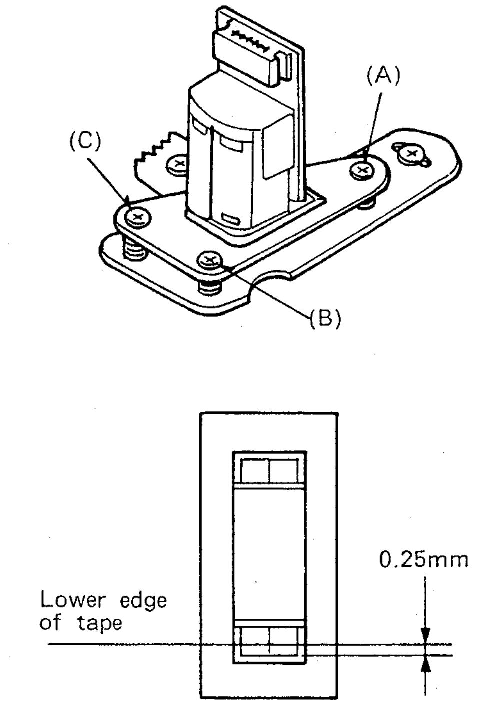


Fig. M12

(3) Height Adjustment of A/C Head (2)

1) Playback the alignment tape.
2) Rotate the screw (A) or (B) until the wrinkle appears on the lower edge of tape at P4 post.
3) Rotate the screw (A) or (B) until the wrinkle just disappears on the lower edge of tape at P4 post.
4) Connect the oscilloscope to audio output terminal.
5) Rotate the screw (C) until audio signal is maximized.



	SCREW (A)	SCREW (B)
So wrinkle appears on the lower edge of tape	COUNTER CLOCKWISE	CLOCKWISE
So wrinkle disappears on the lower edge of tape	CLOCKWISE	COUNTER CLOCKWISE

Fig. M13

(4) Fine-Adjustment of A/C HEAD

<When moving the A/C HEAD up>

1) Rotate the screw (A) counterclockwise until the wrinkle appears on the lower edge of tape at P4 post.
2) Rotate the screw (B) counterclockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
3) Rotate the screw (C) counterclockwise until the audio signal is maximized.

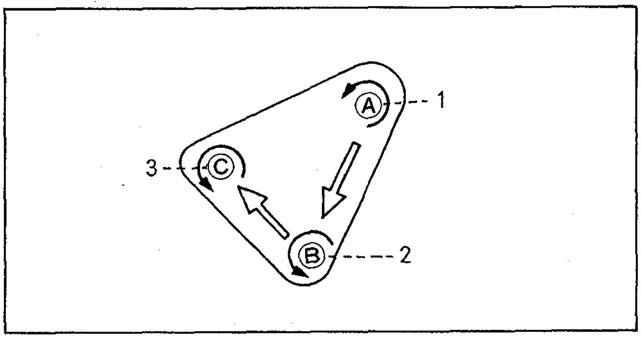


Fig. M14

<When moving the A/C HEAD down>

1) Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape a P4 post.
2) Rotate the screw (A) clockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
3) Rotate the screw (C) clockwise until the audio signal is miximized.

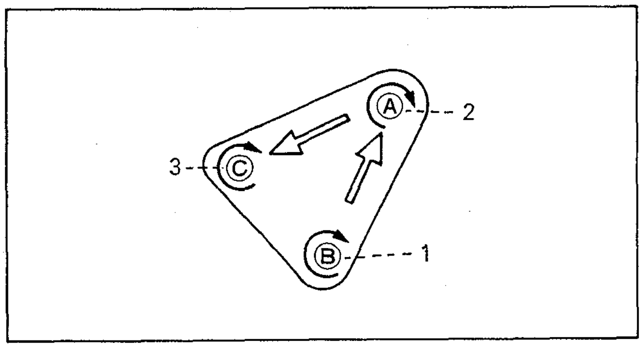


Fig. M15

(5) Horizontal Position Adjustment of A/C HEAD

1) Set the tracking control into the centre fix position. (by pressing the tracking (+) and (−) button simultaneously on the Remote Controller)
2) Connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.
3) Playback the alignment tape.
4) Loosen the 2 screws (F) and (G).
5) Adjust the A/C HEAD BASE (E) until the RF envelope waveform is maximized.

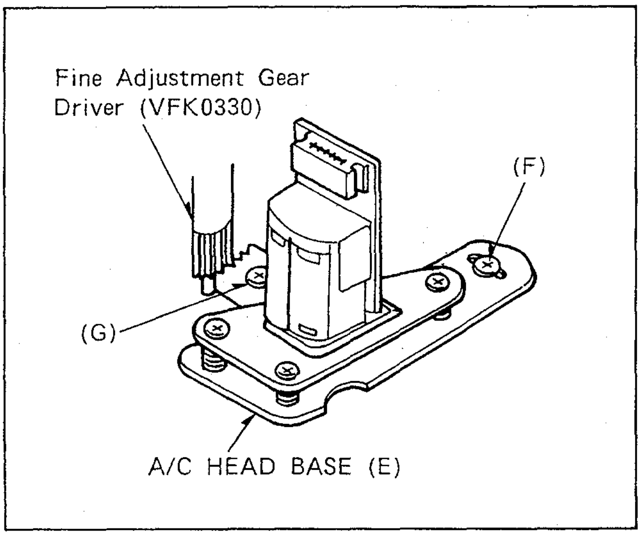


Fig. M16

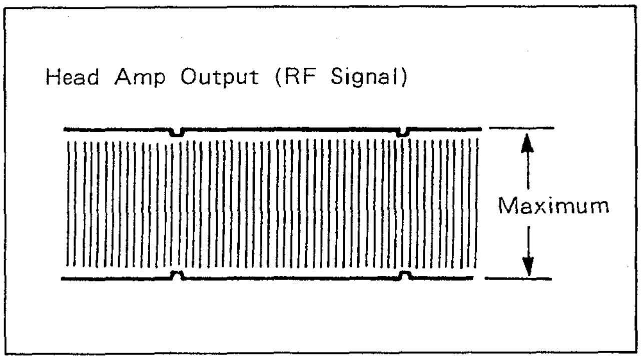
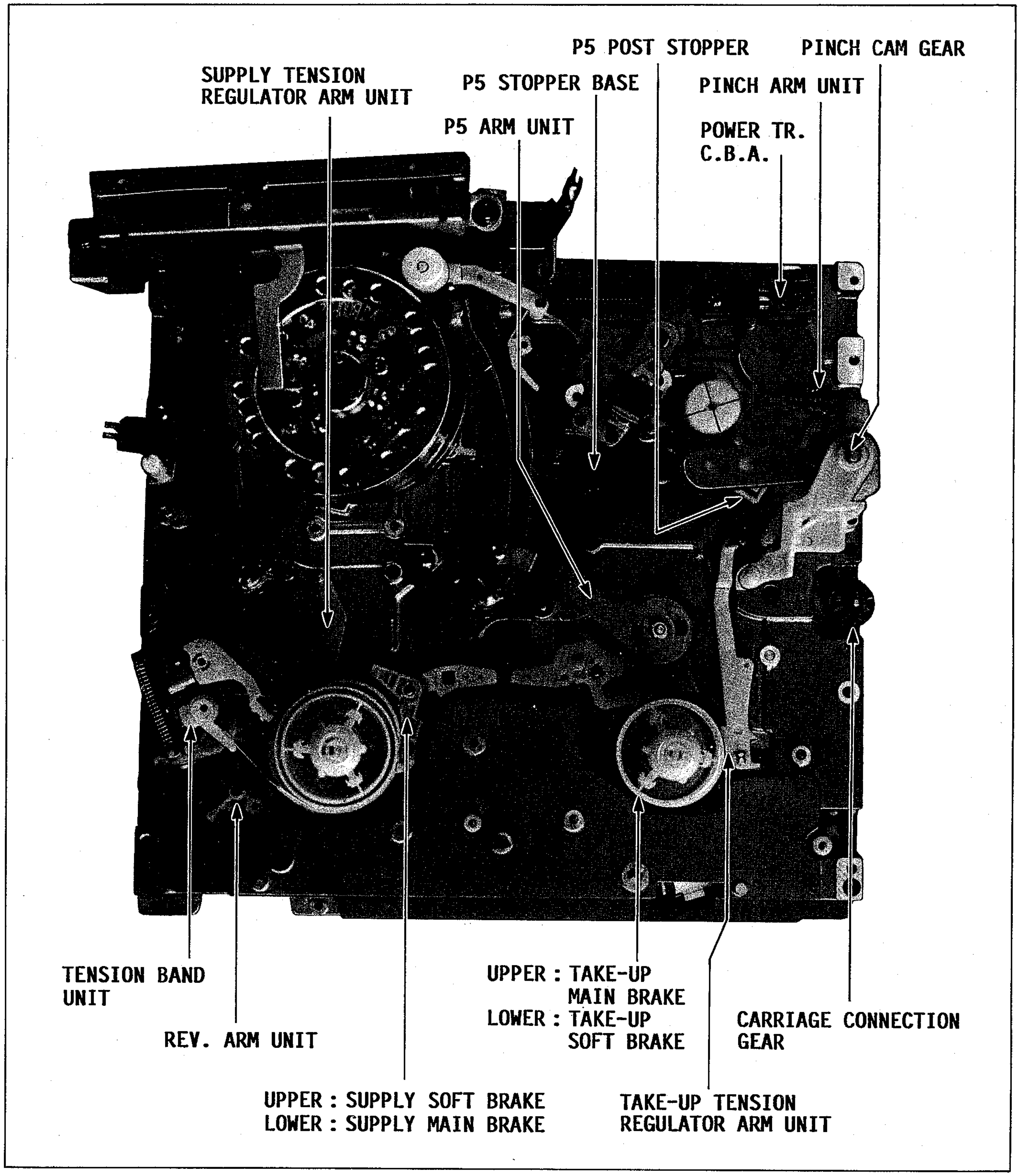


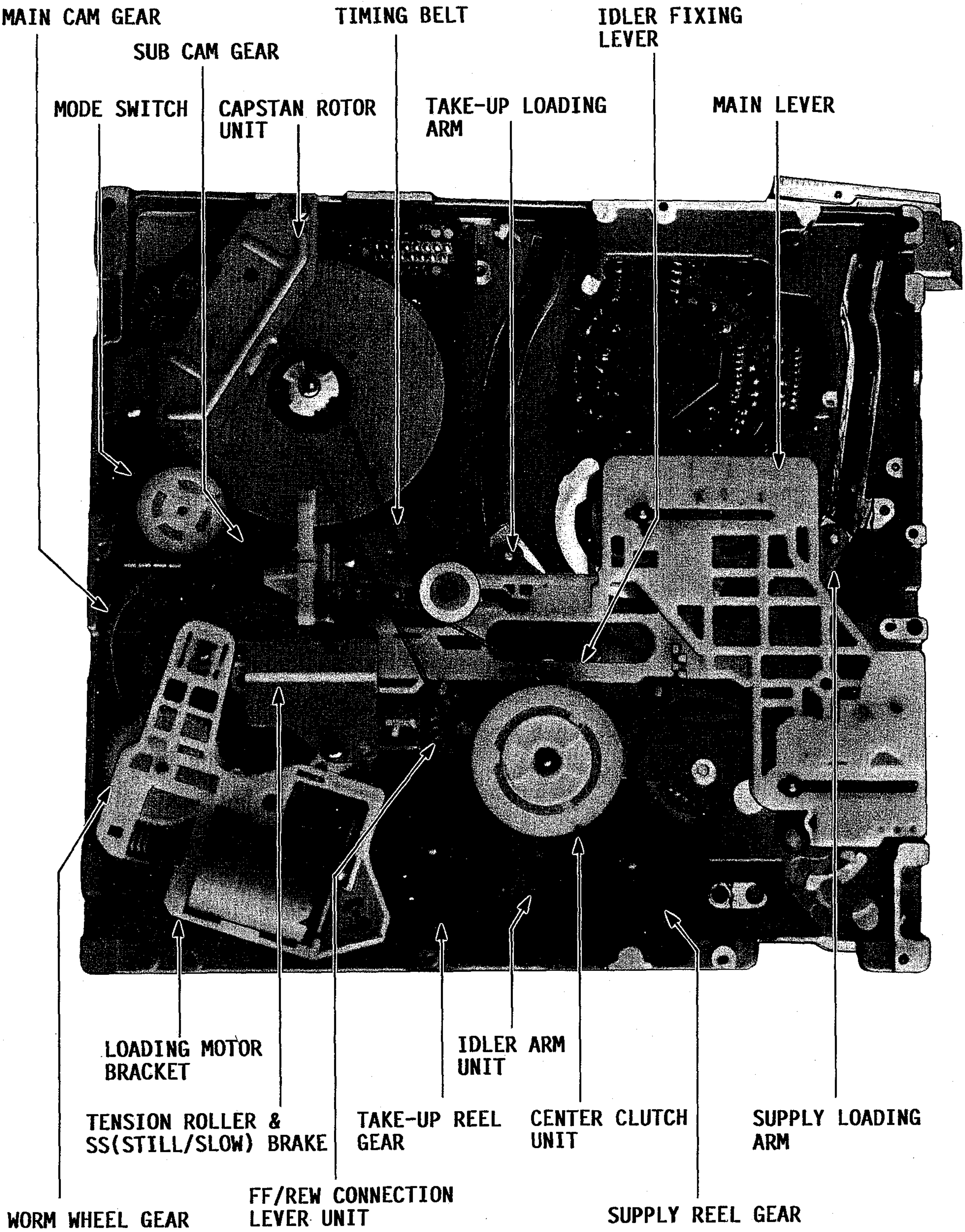
Fig. M17

2-3. DISASSEMBLY PROCEDURES OF MECHANISM

In order to remove the mechanism components it is first necessary to remove the mechanism chassis.


P5 POST STOPPER
PINCH CAM GEAR
SUPPLY TENSION REGULATOR ARM UNIT
P5 STOPPER BASE
PINCH ARM UNIT
P5 ARM UNIT
POWER TR. C.B.A.
TENSION BAND UNIT
REV. ARM UNIT
UPPER : TAKE-UP MAIN BRAKE
LOWER : TAKE-UP SOFT BRAKE
CARRIAGE CONNECTION GEAR
UPPER : SUPPLY SOFT BRAKE
LOWER : SUPPLY MAIN BRAKE
TAKE-UP TENSION REGULATOR ARM UNIT

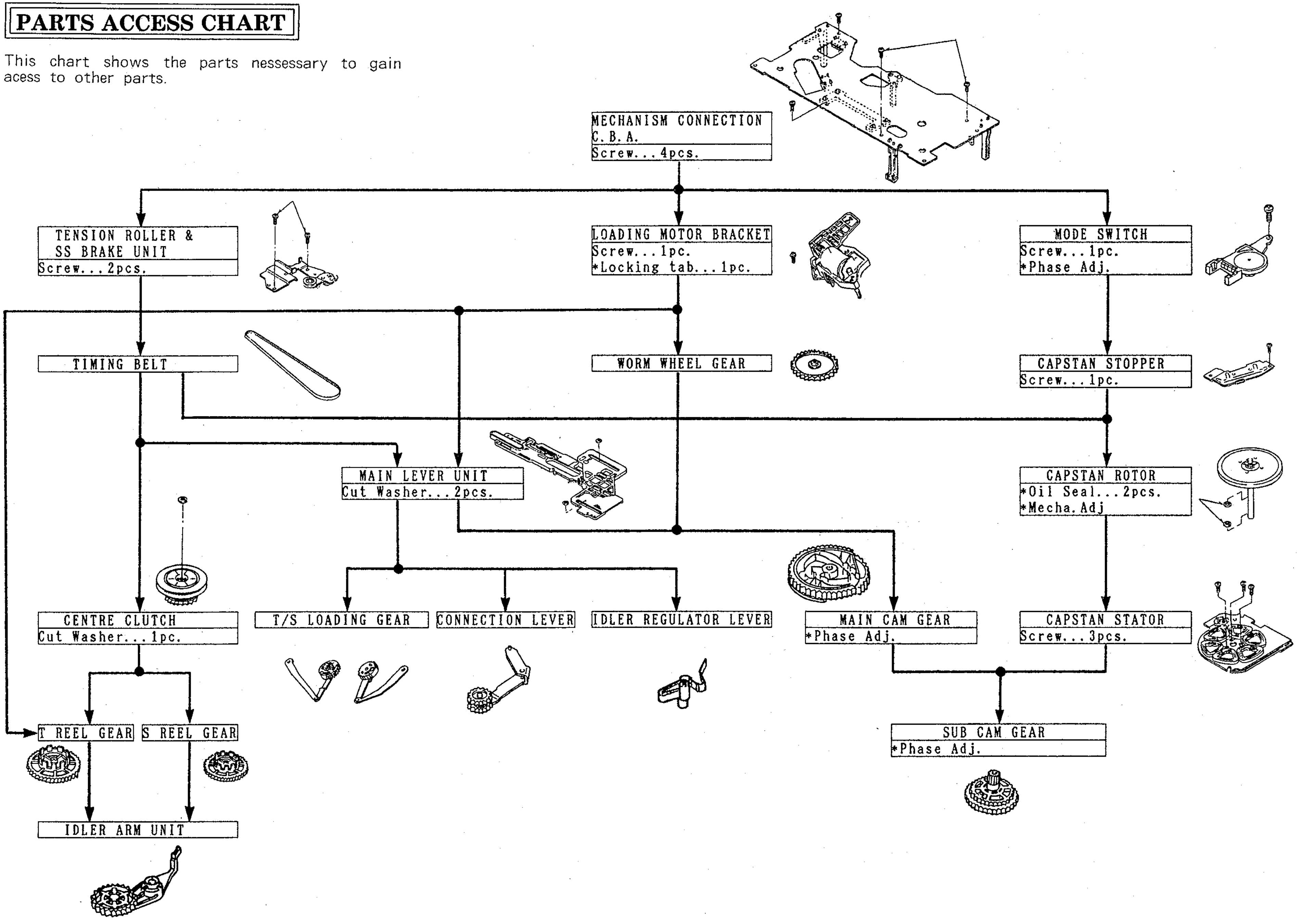
Top View of K Mechanism


MAIN CAM GEAR
SUB CAM GEAR
TIMING BELT
IDLER FIXING LEVER
MODE SWITCH
CAPSTAN ROTOR UNIT
TAKE-UP LOADING ARM
MAIN LEVER
LOADING MOTOR BRACKET
IDLER ARM UNIT
TENSION ROLLER & SS(STILL/SLOW) BRAKE
TAKE-UP REEL GEAR
CENTER CLUTCH UNIT
SUPPLY LOADING ARM
WORM WHEEL GEAR
FF/REW CONNECTION LEVER UNIT
SUPPLY REEL GEAR

Bottom View of K Mechanism

PARTS ACCESS CHART

This chart shows the parts nessessary to gain acess to other parts.


MECHANISM CONNECTION C.B.A.
Screw...4pcs.
TENSION ROLLER & SS BRAKE UNIT
Screw...2pcs.
LOADING MOTOR BRACKET
Screw...1pc.
*Locking tab...1pc.
MODE SWITCH
Screw...1pc.
*Phase Adj.
TIMING BELT
WORM WHEEL GEAR
CAPSTAN STOPPER
Screw...1pc.
MAIN LEVER UNIT
Cut Washer...2pcs.
CAPSTAN ROTOR
*Oil Seal...2pcs.
*Mecha.Adj
CENTRE CLUTCH
Cut Washer...1pc.
T/S LOADING GEAR
CONNECTION LEVER
IDLER REGULATOR LEVER
MAIN CAM GEAR
*Phase Adj.
CAPSTAN STATOR
Screw...3pcs.
T REEL GEAR
S REEL GEAR
SUB CAM GEAR
*Phase Adj.
IDLER ARM UNIT

2-3-1. REMOVAL OF THE MECHANISM CHASSIS

1) Remove the 2 screws(A) push the HOLDER PLATE slightly to the rear of mechanism.
2) Remove the screw(B).
3) Disconnect all cables and connectors on the mechanism chassis and connector P6003 on the MAIN C.B.A.(connecting to DEW SENSOR). (Use extreme care when disconnecting the P1508)
4) Lift the mechanism chassis out of the unit.

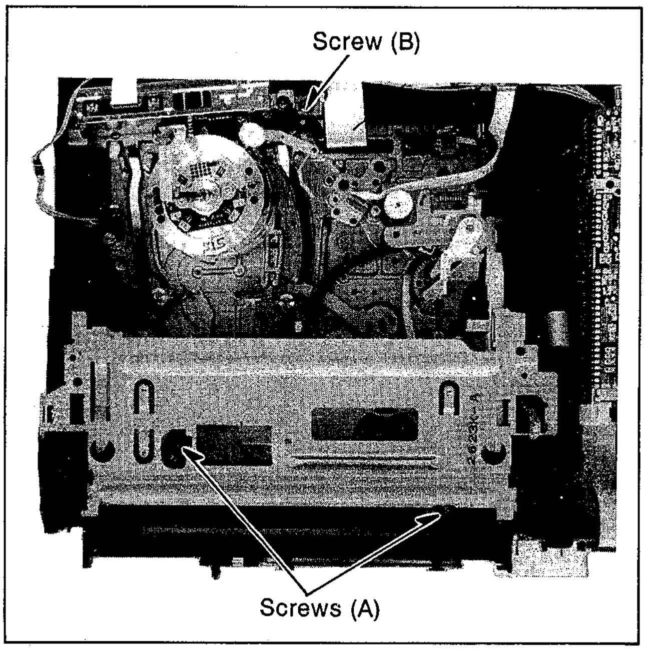

Screw (B)
Screws (A)

Fig. A1

2-3-2. REMOVAL OF THE MECHANISM CONNECTION C.B.A.

1) Remove the 4 screws(C).
2) Lift up on the C.B.A.

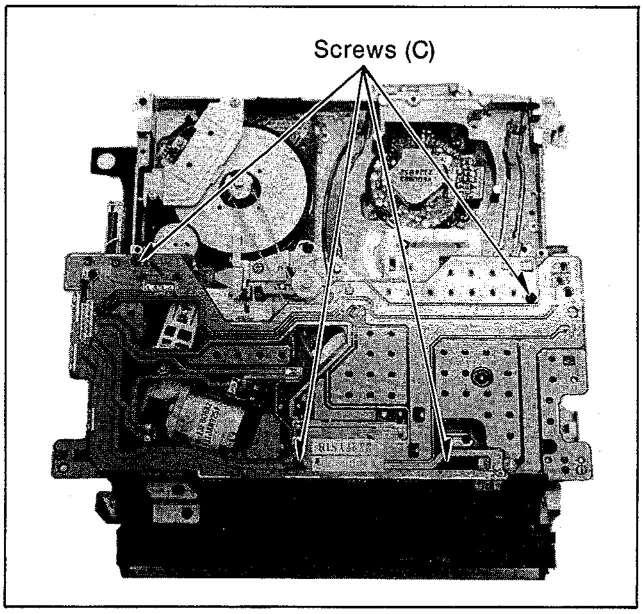


Fig. A2

2-3-3. REMOVAL OF THE TENSION ROLLER AND SS BRAKE

1) Remove the 2 screws(D).
2) Remove the TENSION ROLLER and the SS BRAKE.

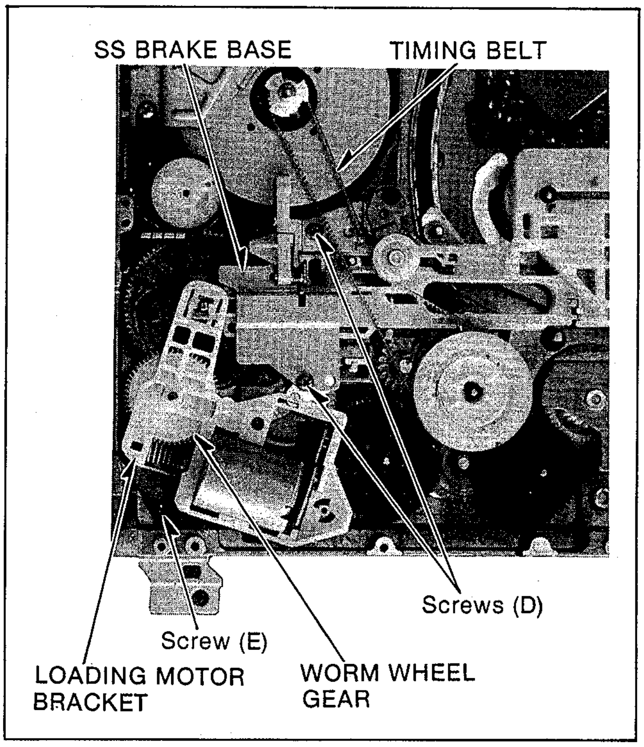

SS BRAKE BASE
TIMING BELT
Screws (D)
Screw (E)
LOADING MOTOR BRACKET
WORM WHEEL GEAR

Fig. A3

2-3-4. REMOVAL OF THE TIMING BELT

1) Remove the TIMING BELT.

2-3-5. REMOVAL OF THE LOADING MOTOR BRACKET

1) Remove the screw(E) as shown in Fig.A3.
2) Disconnect the locking tab on the right by pushing the locking tab in as shown in Fig.A4.
3) Lift up on the LOADING MOTOR BRACKET and push the BRACKET towards the MAIN CAM GEAR as shown in Fig.A3.
4) Lift the WORM WHEEL GEAR off the shaft.

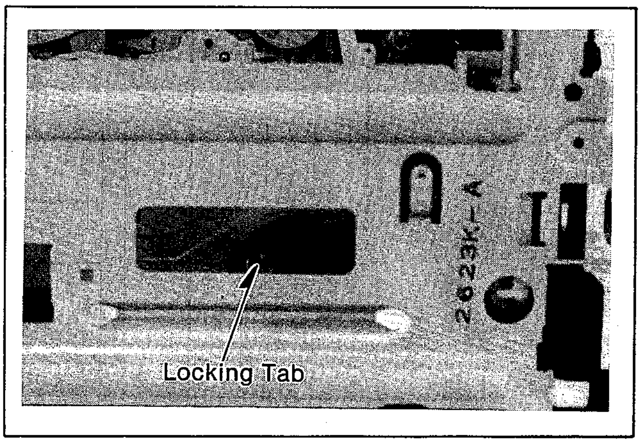

Locking Tab

Fig. A4

2-3-6. REMOVAL OF THE MAIN LEVER UNIT

1) Remove the 2 cut washers.
2) Remove the MAIN LEVER UNIT.

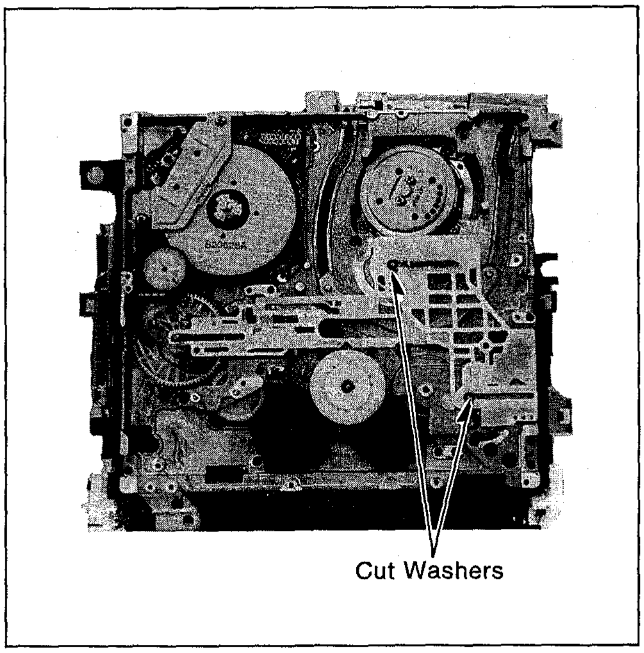

Cut Washers

Fig. A5

2-3-7. REMOVAL OF THE TAKE-UP AND SUPPLY LOADING ARMS

1) Remove the TAKE-UP and SUPPLY LOADING GEARs by lifting them up off the post.

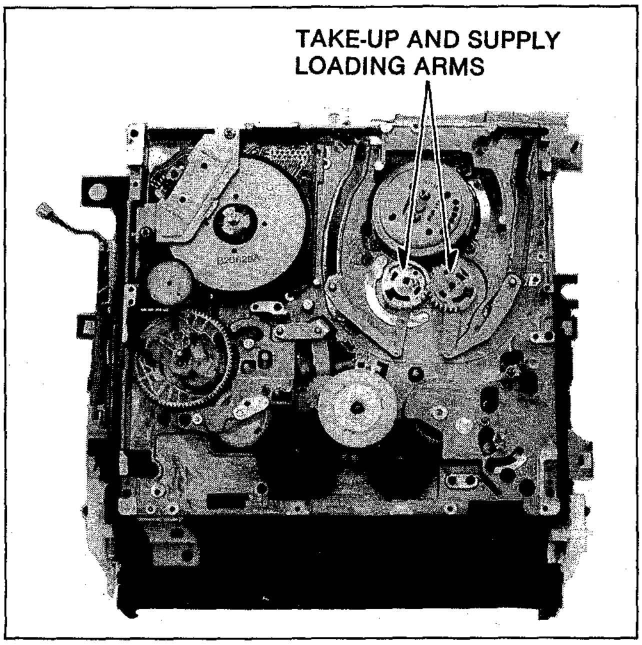

TAKE-UP AND SUPPLY
LOADING ARMS

Fig. A6

2-3-8. REMOVAL OF THE MODE SWITCH

1) Remove screw(F).
2) Remove the MODE SWITCH.

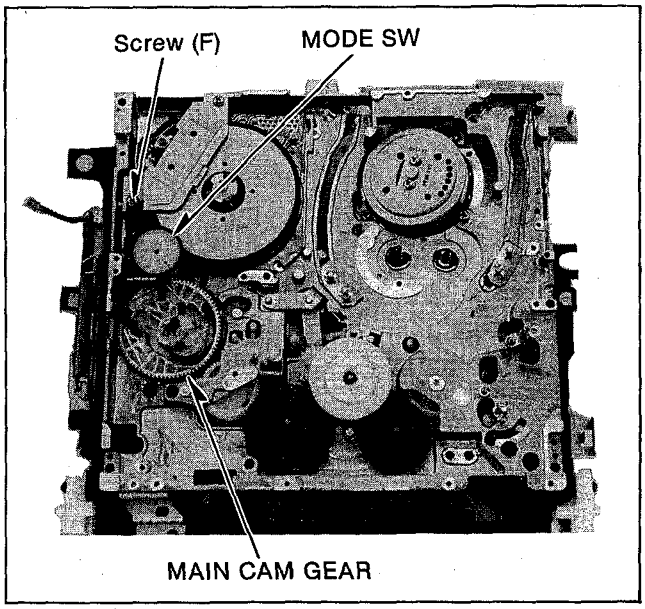

Screw (F)
MODE SW
MAIN CAM GEAR

Fig. A7

2-3-9. REMOVAL OF THE MAIN CAM GEAR

1) Lift the MAIN CAM GEAR off the shaft.

2-3-10. REMOVAL OF THE CAPSTAN ROTOR UNIT

1) Remove the screw(G) and remove the CAPSTAN STOPPER as shown in Fig.A8.

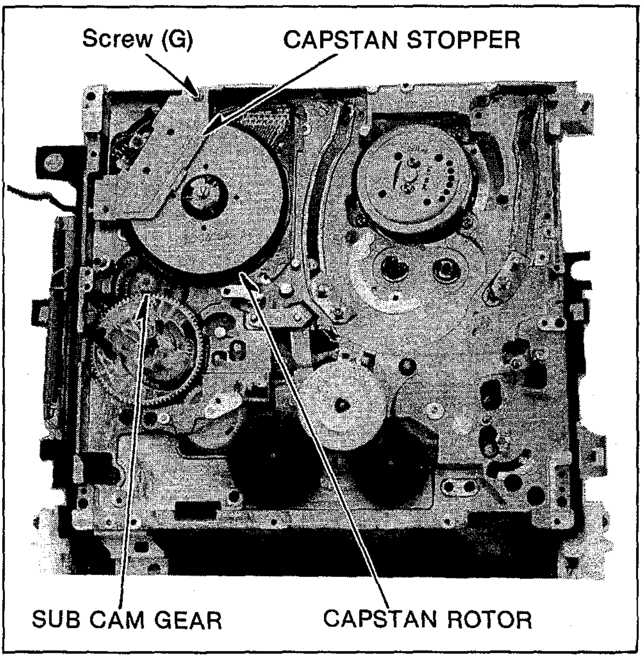

Screw (G)
CAPSTAN STOPPER
SUB CAM GEAR
CAPSTAN ROTOR

Fig. A8

2) Pull out the CAPSTAN ROTOR.
(When the CAPSTAN ROTOR is removed, 2 OIL SEALs are left in the CAPSTAN ROTOR HOUSING Fig.A9.. To avoid losing the OIL SEALs, place them back on the CAPSTAN SHAFT.)

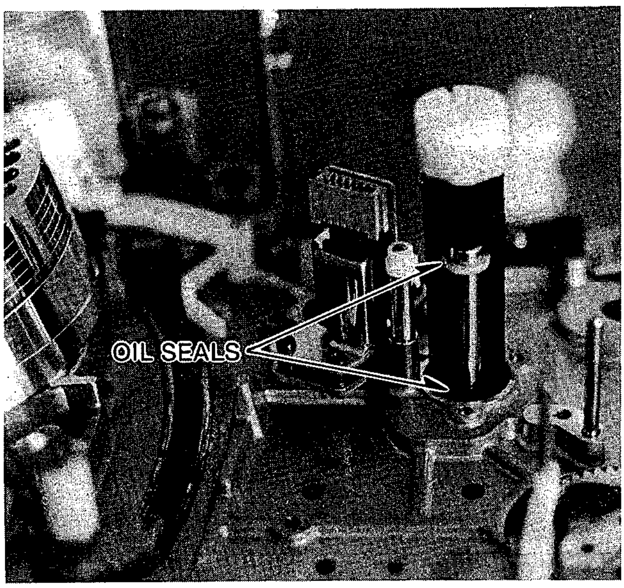


Fig. A9

3) Remove the 3 screws(H) and remove the CAPSTAN STATOR as shown in Fig.A10.

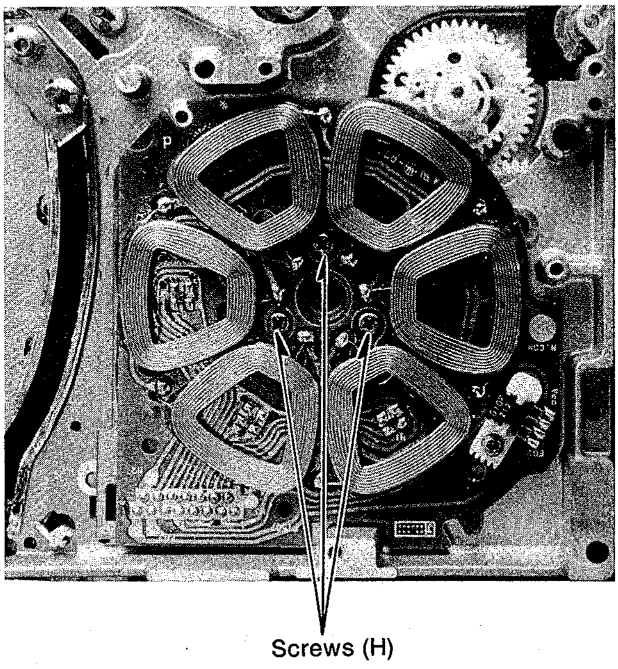


Fig. A10

2-3-11. REMOVAL OF THE SUB CAM GEAR

1) Lift the SUB CAM GEAR off the shaft.

2-3-12. REMOVAL OF THE CENTRE CLUTCH

1) Remove the cut washer.
2) Remove the CENTRE CLUTCH.

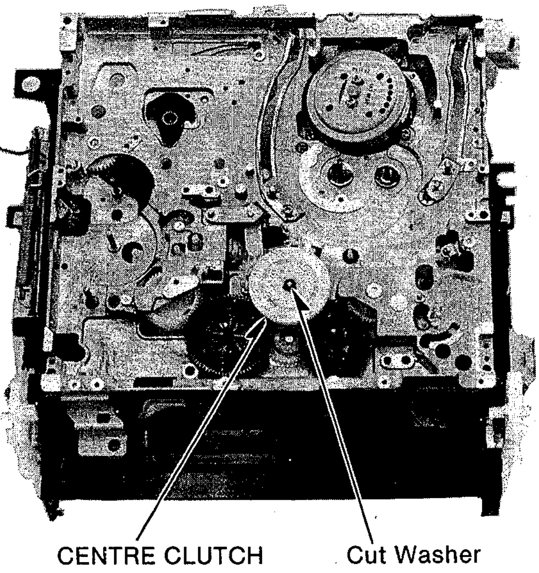

CENTRE CLUTCH
Cut Washer

Fig. A11

2-3-13. REMOVAL OF THE TAKE-UP AND SUPPLY REEL GEARS

1) Unlock the locking tab and lift up on the reel.

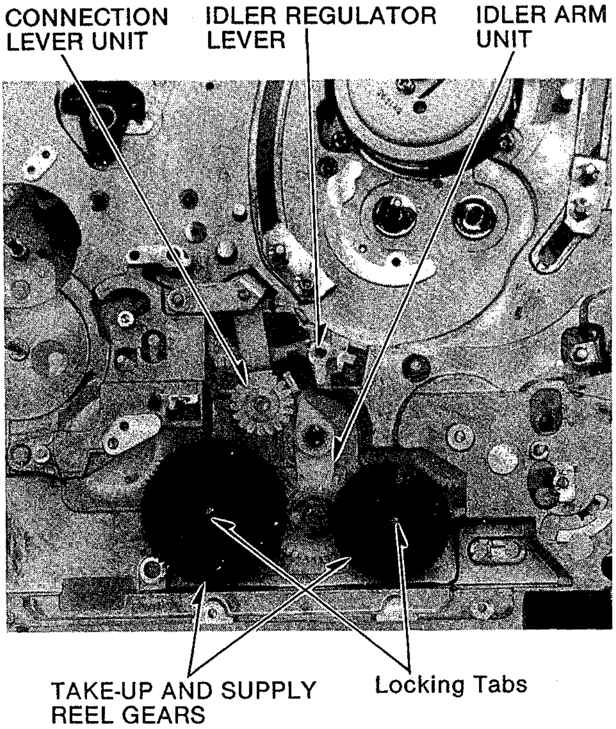

CONNECTION LEVER UNIT
IDLER REGULATOR LEVER
IDLER ARM UNIT
TAKE-UP AND SUPPLY REEL GEARS
Locking Tabs

Fig. A12

2-3-14. REMOVAL OF THE IDLER ARM UNIT, CONNECTION LEVER UNIT AND IDLER REGULATOR LEVER

1) Lift the IDLER ARM UNIT and CONNECTION LEVER UNIT off the shaft.
2) Remove the IDLER REGULATOR LEVER.

2-3-15. REMOVAL OF THE TOP PLATE

1) Push the locking tabs from the outer side to inside as shown in Fig.A13.
2) Lift up on the TOP PLATE.

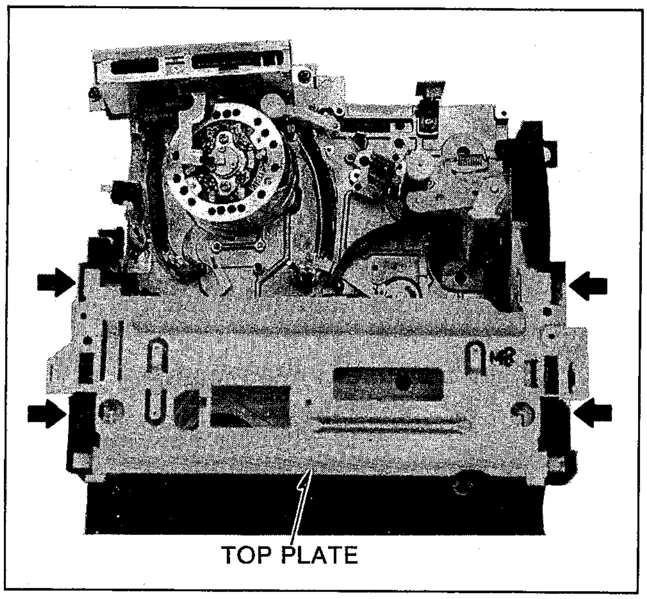


Fig. A13

NOTE:
If locking tab is broken, TOP PLATE can be installed by screws(XTB26+8G) as shown in Fig.A14.

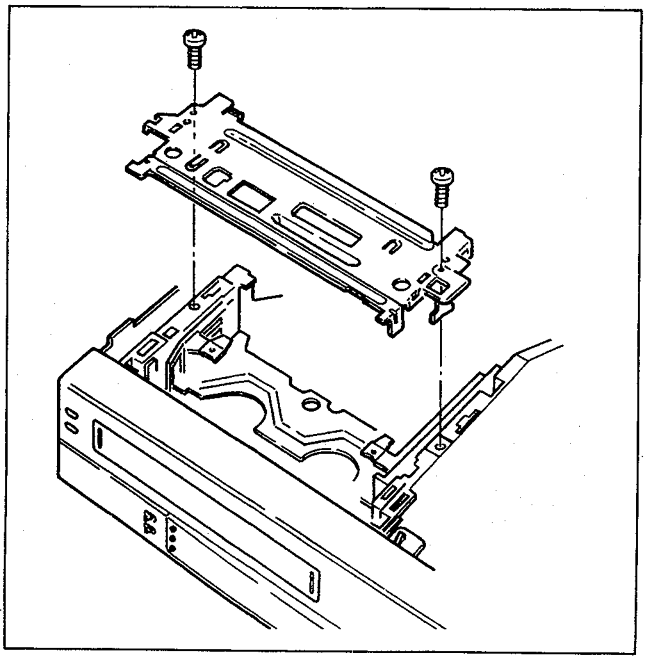


Fig. A14

2-3-16. REMOVAL OF THE CASSETTE HOLDER

1) Slide the HOLDER PLATE in the rear and lift up.
2) Remove the 4 screws(I).
3) Remove the CASSETTE HOLDER.

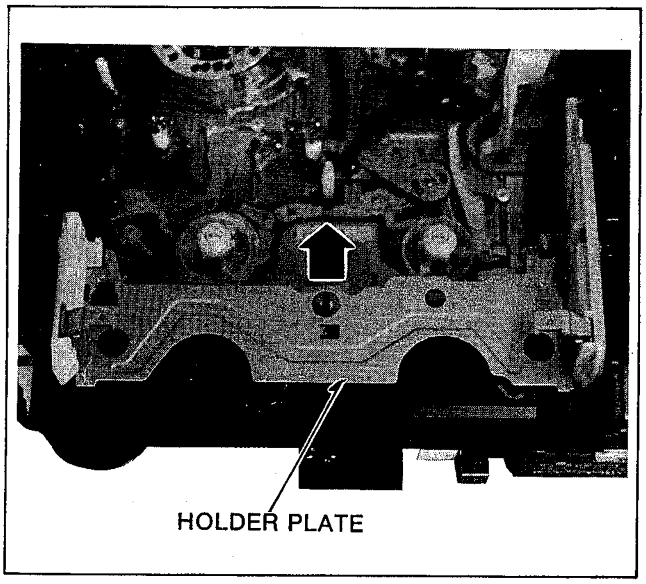


Fig. A15

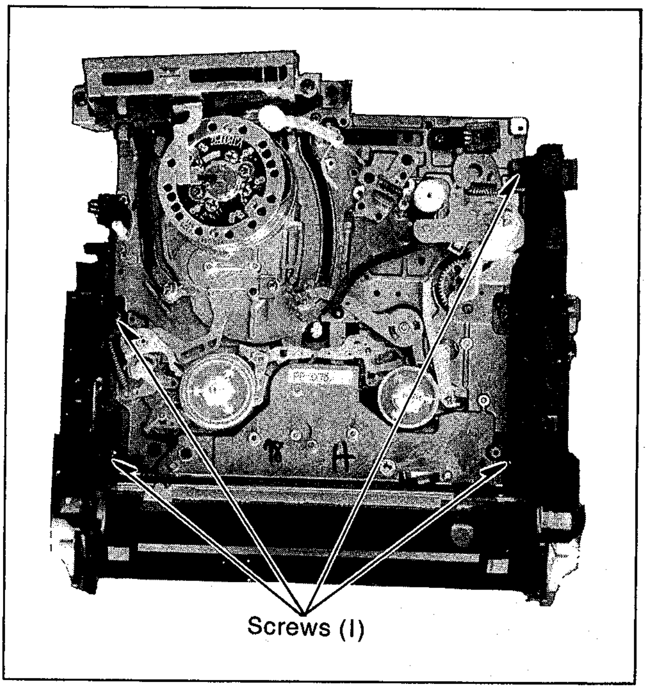


Fig. A16

2-3-17. REMOVAL OF THE PINCH ARM UNIT

1) Unlock the locking tab on the OPENER PIECE and remove it from the shaft.
2) Remove the PINCH ARM UNIT from the shaft.

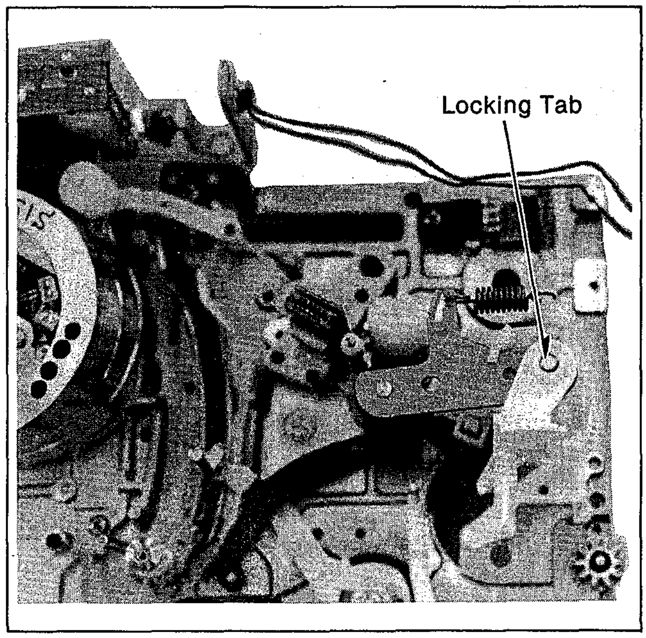

Locking Tab

Fig. A17

2-3-18. REMOVAL OF THE PINCH CAM GEAR AND P5 ARM UNIT

1) Unlock the locking tab of the P5 STOPPER and remove the P5 STOPPER.
2) Remove the screw(J) and the cut washer.
3) Remove the P5 STOPPER BASE.
4) Remove the PINCH CAM GEAR and P5 ARM UNIT.

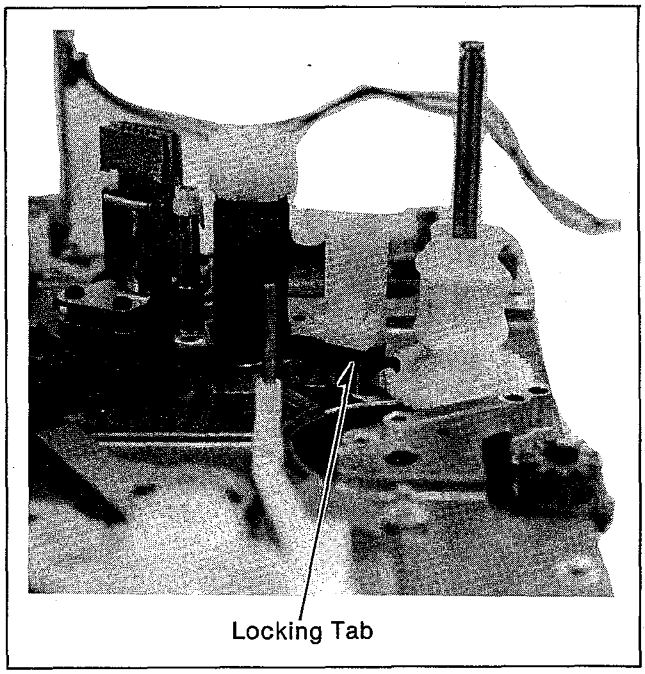

Locking Tab

Fig. A18

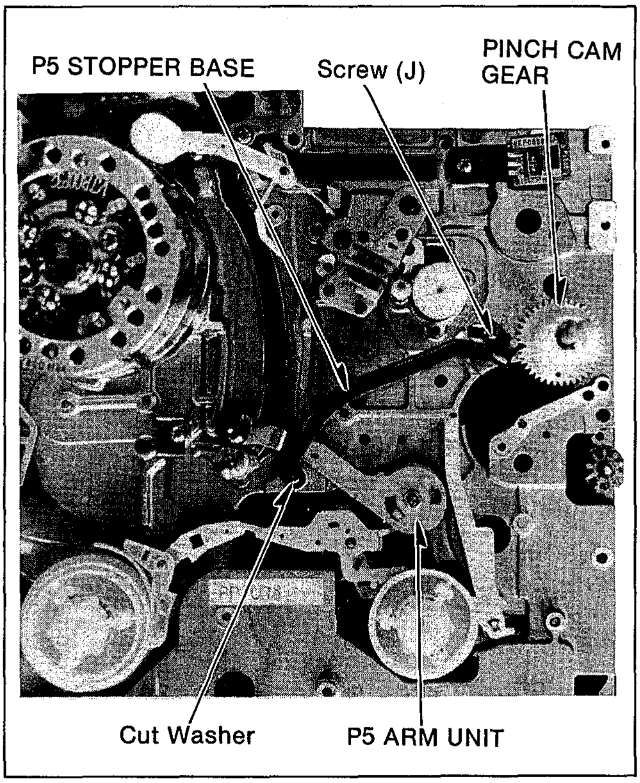

P5 STOPPER BASE
Screw (J)
PINCH CAM GEAR
Cut Washer
P5 ARM UNIT

Fig. A19

2-3-19. REMOVAL OF THE TAKE-UP TENSION REGULATOR ARM UNIT

1) Disconnect the spring from the bottom of the chassis.
2) Unlock the locking tab and lift the TAKE-UP TENSION REGULATOR ARM UNIT off the shaft.

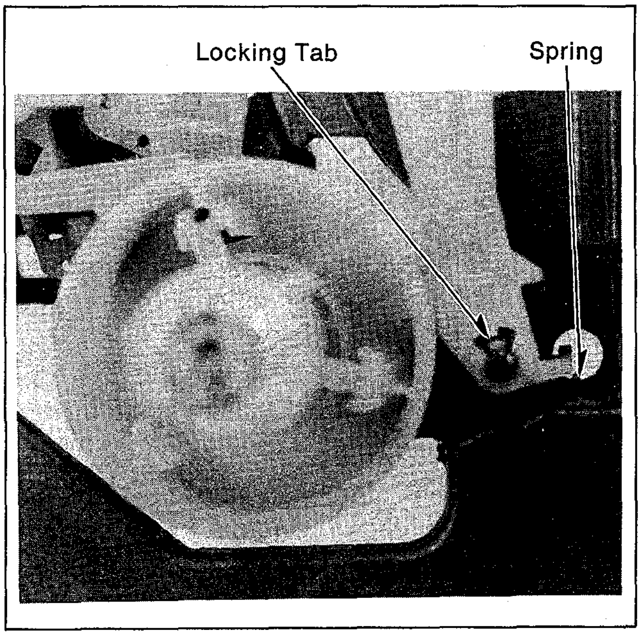

Locking Tab
Spring

Fig. A20

2-3-20. REMOVAL OF THE CARRIAGE CONNECTION GEAR

1) Remove the cut washer.
2) Lift the CARRIAGE CONNECTION GEAR off the shaft.

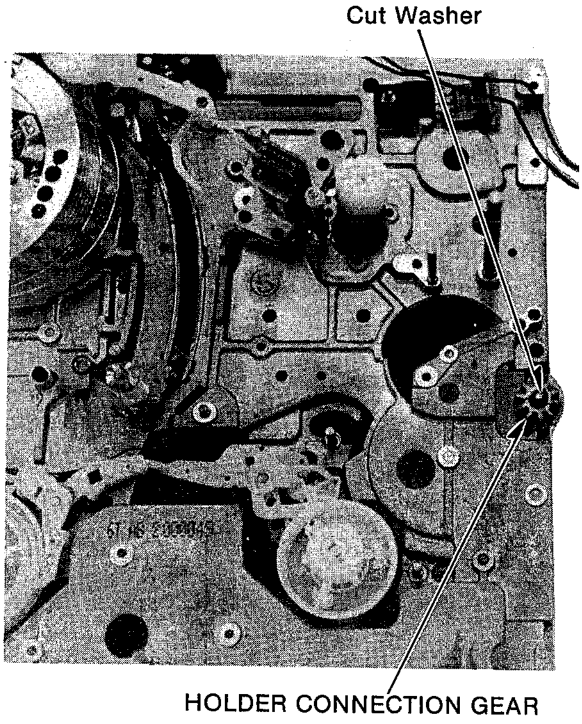

Cut Washer
HOLDER CONNECTION GEAR

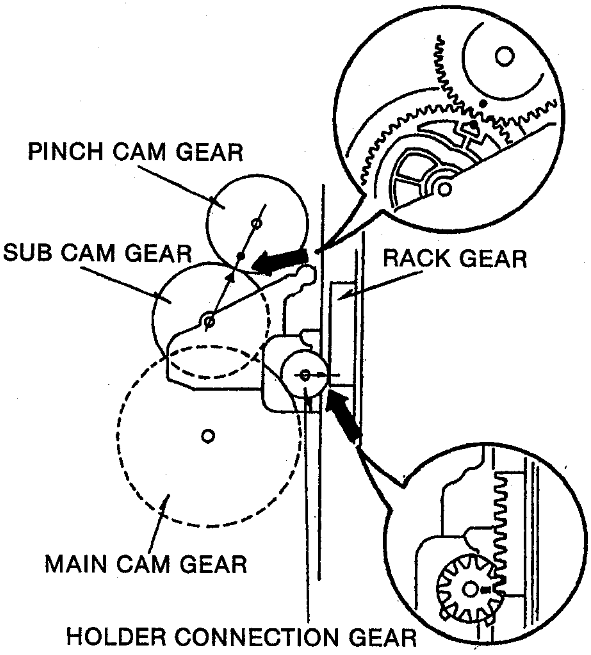
Fig. A21

2-4. ASSEMBLY PROCEDURES OF MECHANISM

2-4-1. VIEW OF PHASE ALIGNMENT

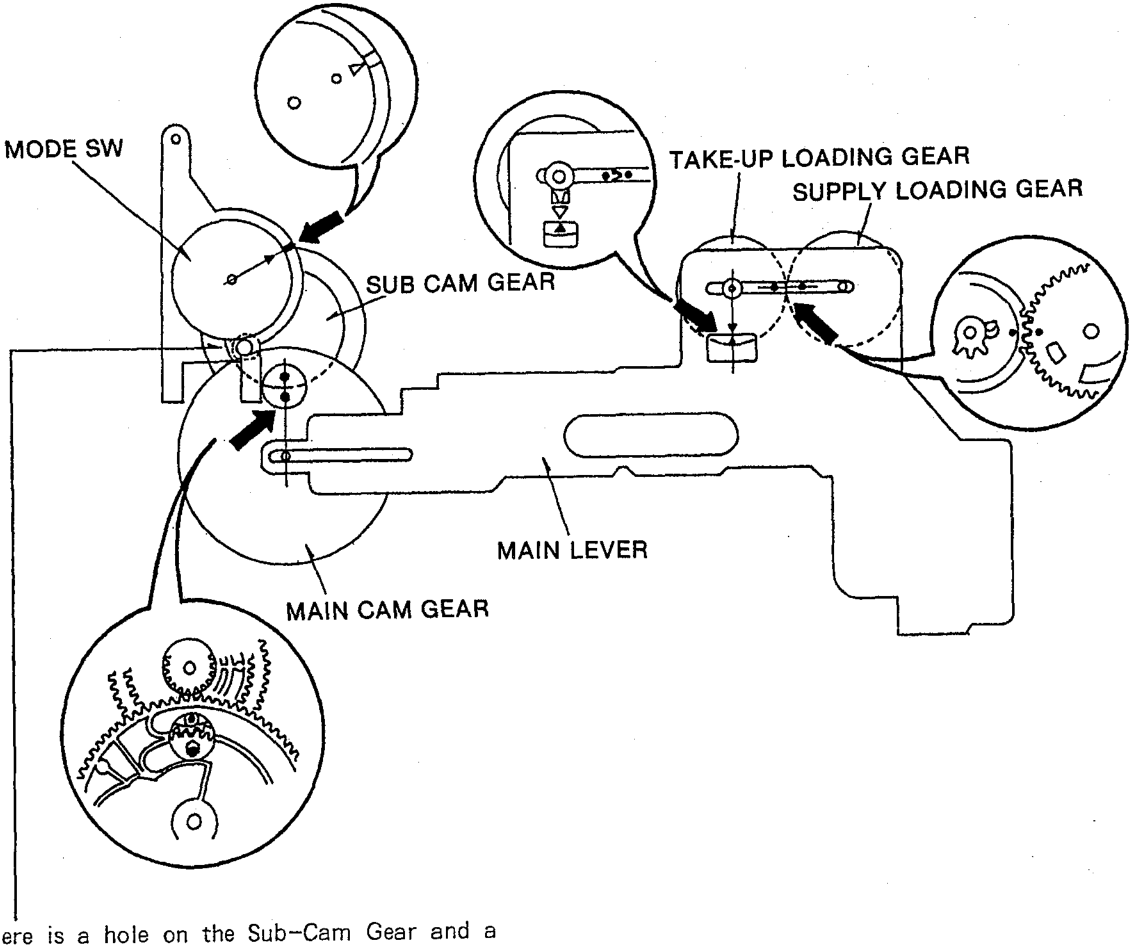
The gear phase alignment is performed in the cassette down position and is crucial for the K-Mechanism to operate correctly.

1) Top View of Gear Phase Alignment Marks.
   There are alignment marks on the Pinch Cam Gear and Sub Cam Gear. There is one alignment mark on the carriage connection gear.


PINCH CAM GEAR
SUB CAM GEAR
RACK GEAR
MAIN CAM GEAR
HOLDER CONNECTION GEAR

Top View of Gear Phase Alignment

2) Bottom View of Gear Phase Alignment Marks. There are alignment marks on Take-up Loading Gear and Supply Loading Gear. There is an additional mark on the Take-up Loading Gear that aligns with the mark on the main lever. There are alignment marks on the Main Cam Gear and the Sub Cam Gear. The mode switch gear mark aligns with a notch in the mode switch frame.


MODE SW
TAKE-UP LOADING GEAR
SUPPLY LOADING GEAR
SUB CAM GEAR
MAIN LEVER
MAIN CAM GEAR

There is a hole on the Sub-Cam Gear and a hole on the chassis that are used for alignment reference.

Bottom View of Gear Phase Alignment

2-4-2. ASSEMBLY OF THE CARRIAGE CONNECTION GEAR

1) Install the CARRIAGE CONNECTION GEAR as shown in Fig.A21.
2) Install the cut washer.

2-4-3. ASSEMBLY OF THE TAKE-UP TENSION REGULATOR ARM UNIT, P5 ARM UNIT PINCH CAM GEAR, P5 STOPPER BASE, P5 STOPPER, PINCH CAM UNIT AND OPENER PIECE

1) Install the TAKE-UP TENSION REGULATOR ARM UNIT.
2) Hook the spring to hole on the chassis.
3) Install the P5 ARM UNIT and PINCH CAM GEAR.
4) Install the P5 STOPPER BASE with cut washer and screw(J).
5) Install the P5 STOPPER, PINCH ARM UNIT and OPENER PIECE.

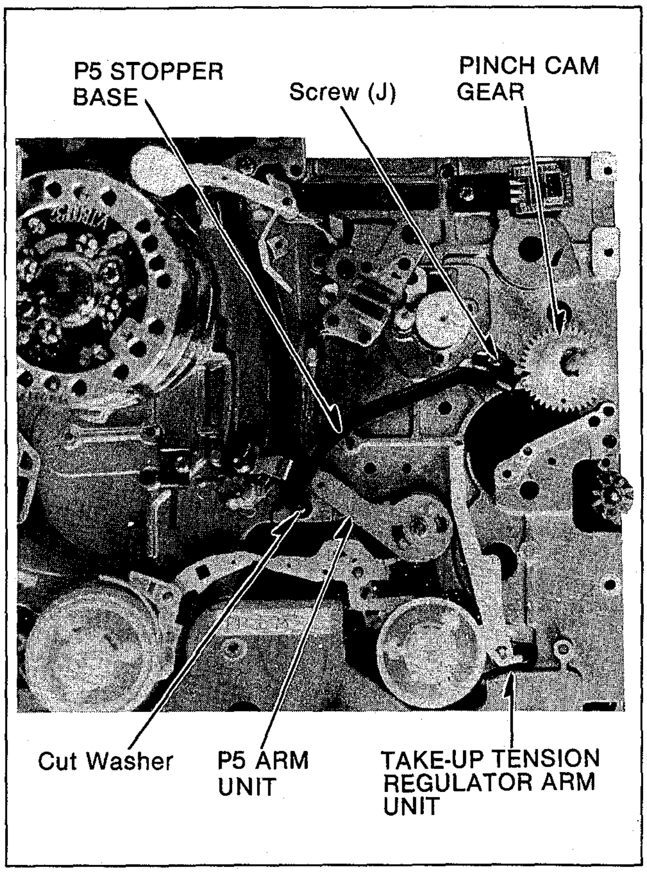

P5 STOPPER BASE
Screw (J)
PINCH CAM GEAR
Cut Washer
P5 ARM UNIT
TAKE-UP TENSION REGULATOR ARM UNIT

Fig. K1

2-4-4. ASSEMBLY OF THE IDLER ARM UNIT, TAKE-UP AND SUPPLY REEL GEARS, IDLER REGULATOR LEVER, CONNECTION LEVER UNIT AND CENTRE CLUTCH

1) Install the IDLER UNIT, TAKE-UP and SUPPLY REEL GEARs, IDLER REGULATOR LEVER and CONNECTION LEVER UNIT.
2) Install the CENTRE CLUTCH with cut washer.

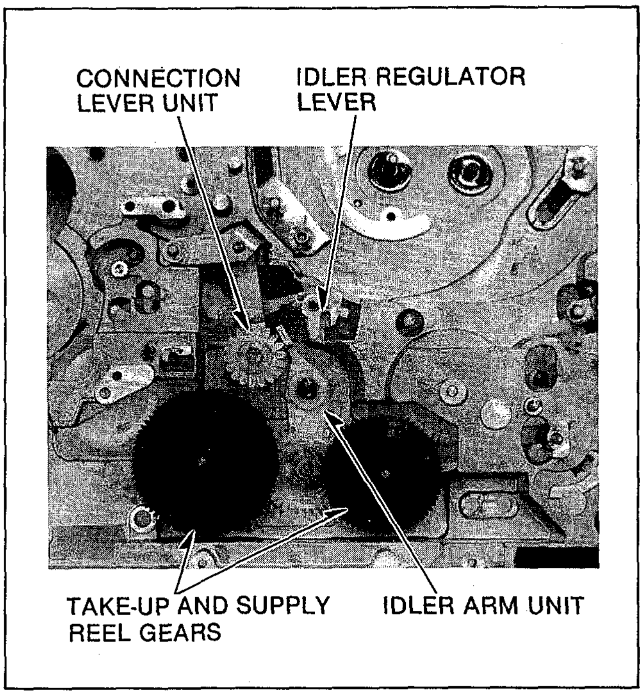

CONNECTION LEVER UNIT
IDLER REGULATOR LEVER
TAKE-UP AND SUPPLY REEL GEARS
IDLER ARM UNIT

Fig. K2

2-4-5. ASSEMBLY OF THE SUB CAM GEAR

The SUB CAM GEAR is used for the reference of the phase.

1) Install the SUB CAM GEAR so that the chassis hole aligns with hole in the SUB CAM GEAR. Also, the hole in the outer gear of the SUB CAM GEAR must align with the hole in the PINCH CAM GEAR. The boss on the PINCH ARM must be installed in the cam groove of the SUB-CAM GEAR. This is used for the reference of the phase. To aid installation of the SUB-CAM GEAR insert a fixing pin into the holes of the SUB-CAM GEAR and the chassis.

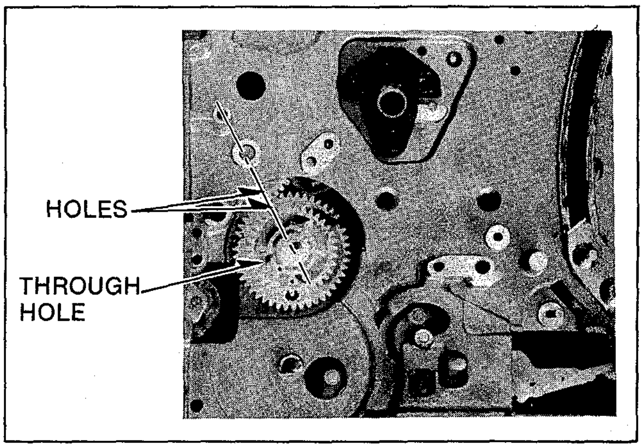

HOLES
THROUGH HOLE

Fig. K3

2-4-6. ASSEMBLY OF THE STATOR UNIT

1) Place the STATOR UNIT into position. Loosely reinstall the 3 screws that secure the STATOR and HOUSING UNIT. Next insert the CENTERING PIN then tighten the 3 screws as shown in Fig.K4.

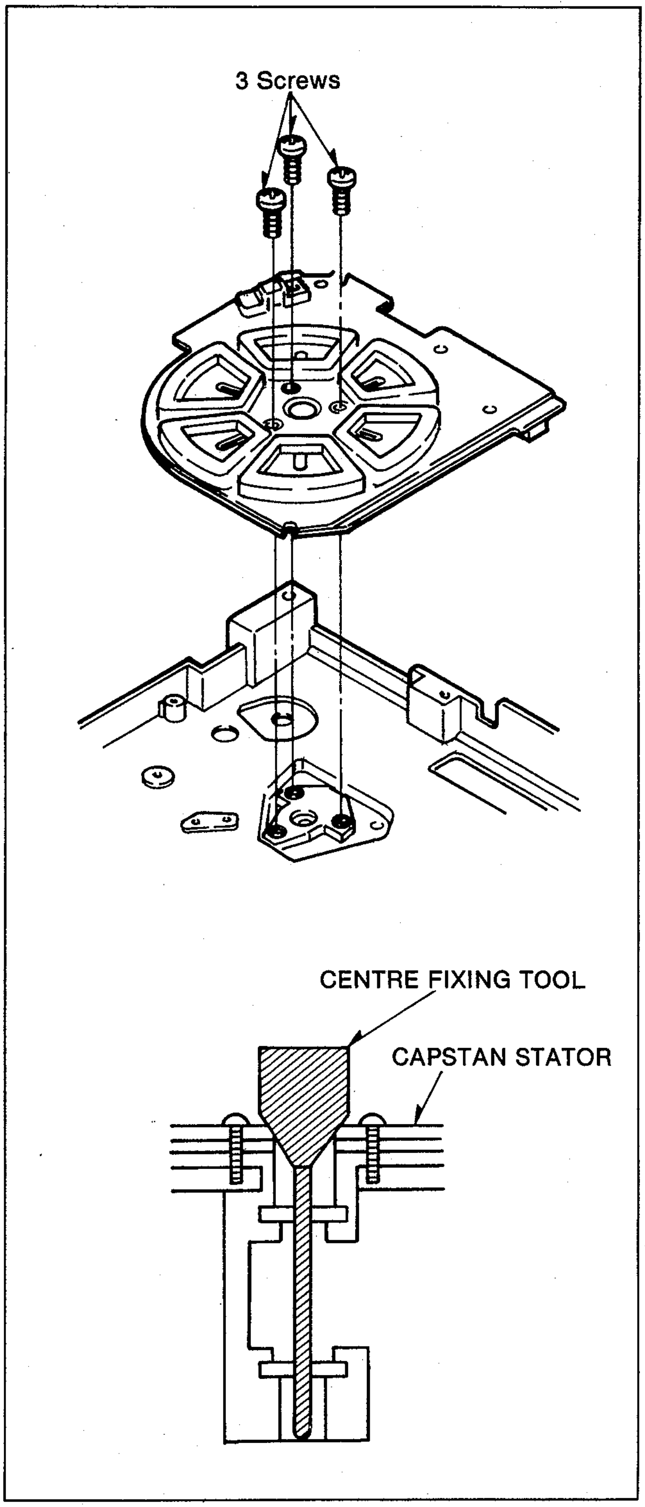


Fig. K4

2) Remove the oil seal from the ROTOR SHAFT Partially install the ROTOR SHAFT into the lower position and install the oil seal. Insert the ROTOR SHAFT further into the housing and install the second OIL SEAL in the upper position. Push the lower OIL SEAL down the ROTOR SHAFT into the housing.

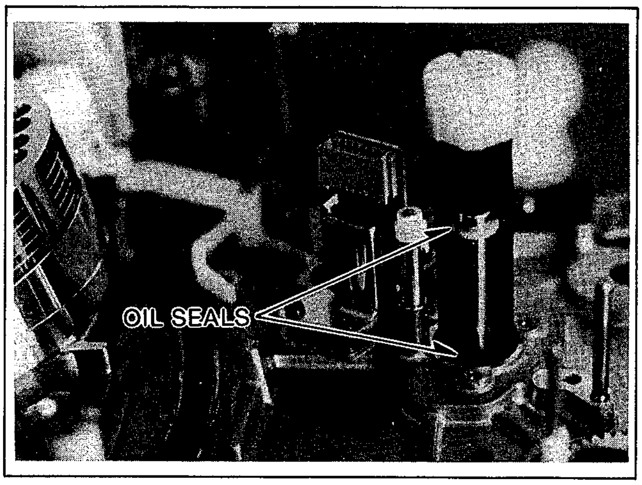


Fig. K5

3) Clean the ROTOR SHAFT after replacement. Reinstall the ROTOR STOPPER and the screw on the top side.

2-4-7. ASSEMBLY OF THE MAIN CAM GEAR

NOTE:
Before installing the MAIN CAM GEAR, set the CONNECTION GEAR so that the side of the gear with no teeth is towards the MAIN CAM GEAR.

1) Install the MAIN CAM GEAR so that the hole marker aligns with the SUB-CAM GEAR and insert the boss of the TAKE-UP TENSION REGULATOR ARM into the slot on the bottom of the MAIN CAM GEAR.

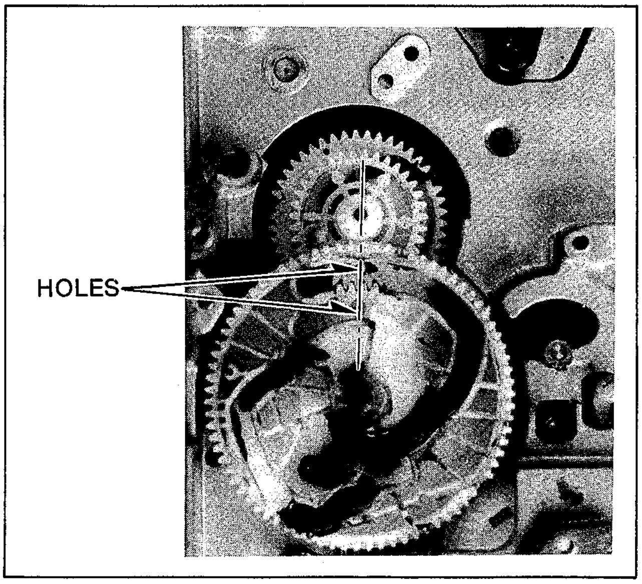


Fig. K6

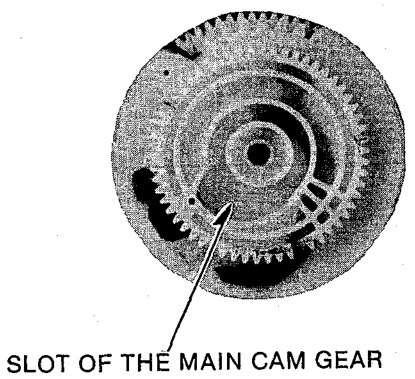


Fig. K7

2-4-8. ASSEMBLY OF THE MODE SW

1) Align the mark on the MODE SWITCH GEAR with the notch on the MODE SWITCH FRAME.
2) Install the MODE SWITCH taking care that all the phase alignments are correct. Check the CAM GEAR timing by rotating the MAIN CAM GEAR.
3) Install the screw(K) the retains the MODE SWITCH and ROTOR STOPPER.

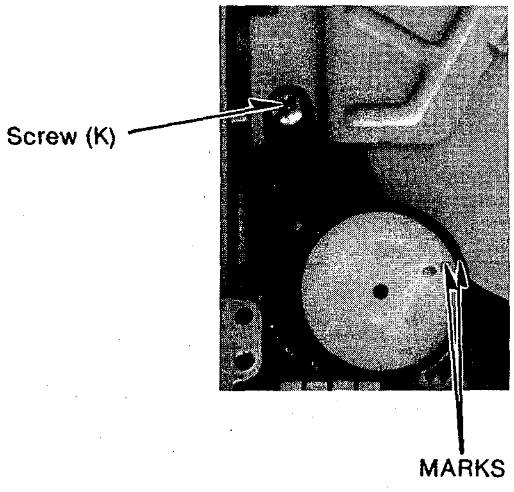


Fig. K8

2-4-9. ASSEMBLY OF THE T & S LOADING ARMS

1) Set the shaft holders to the unloaded position. Take care that the P5 POST does not interfere with the P3 Post or prevent it from going to the unloaded position. The TENSION ARM must be set to the position that will allow the P2 POST to move back to the unloaded position.

2) Install the TAKE-UP LOADING ARM and SUPPLY LOADING ARM, aligning the marks on the both GEARS.

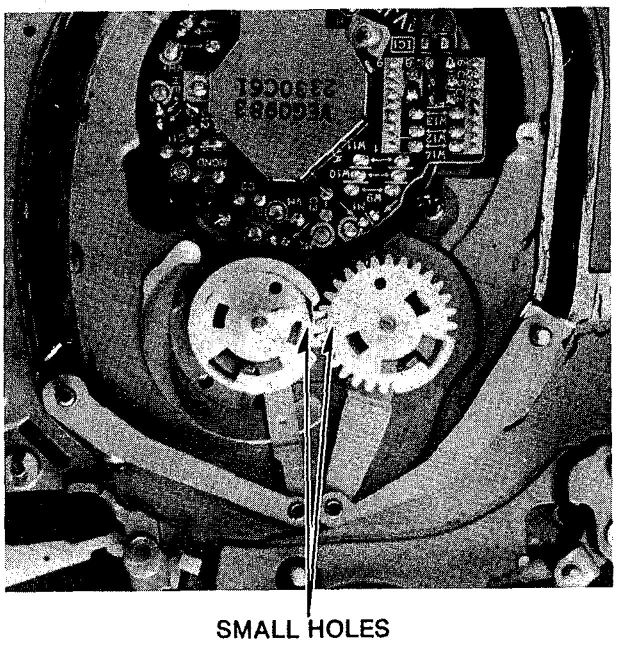


Fig. K9

2–4–10. ASSEMBLY OF THE MAIN LEVER

1) Install the MAIN LEVER ARM checking that the boss arms and shafts are in the correct position and the mark on the MAIN LEVER ARM is aligned with mark on the TAKE–UP LOADING GEAR.

2) Install the 2 cut washers.

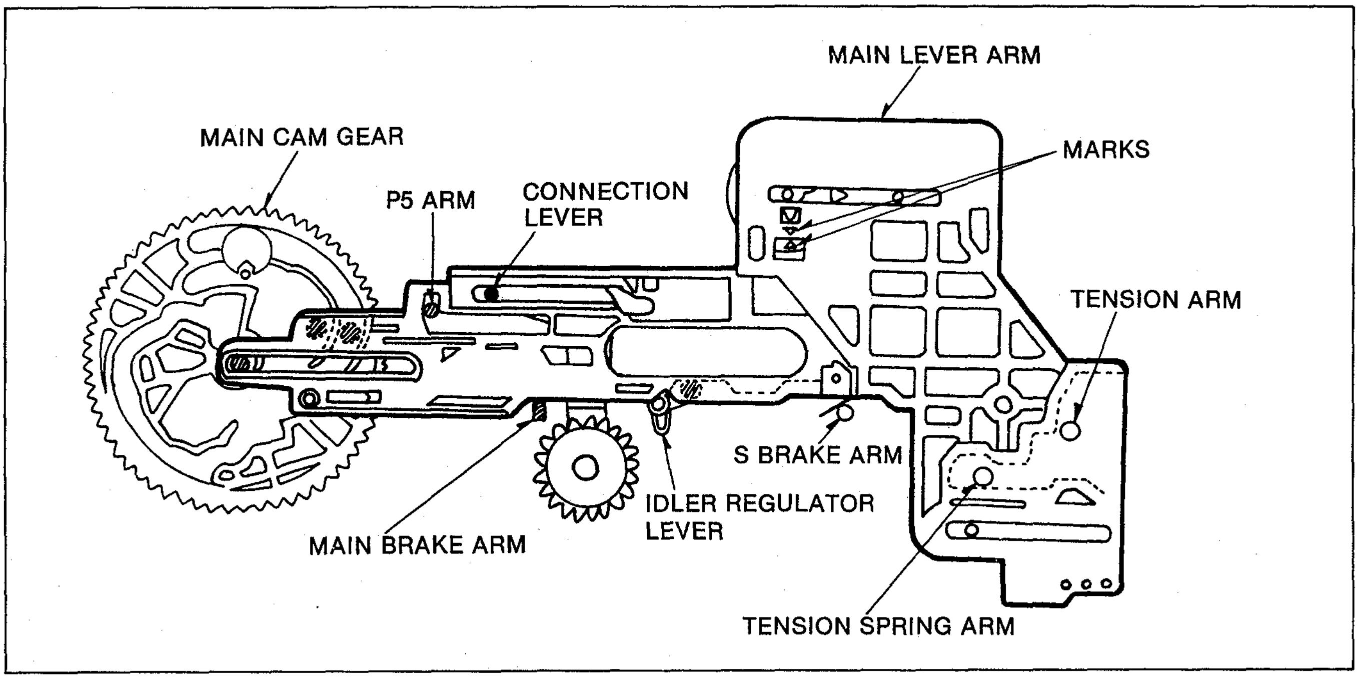

MAIN LEVER ARM
MAIN CAM GEAR
MARKS
P5 ARM
CONNECTION LEVER
TENSION ARM
S BRAKE ARM
IDLER REGULATOR LEVER
MAIN BRAKE ARM
TENSION SPRING ARM

Fig. K10

2–4–11. ASSEMBLY OF THE WORM WHEEL GEAR & LOADING MOTOR BRACKET

1) Reinstall the WORM WHEEL GEAR.

2) Install the LOADING MOTOR BRACKET. First set the BRACKET over the MAIN CAM GEAR shaft and slide until it locks. Then push down on the BRACKET until the locking tab is connected to the chassis. Reinstall the screw(L).

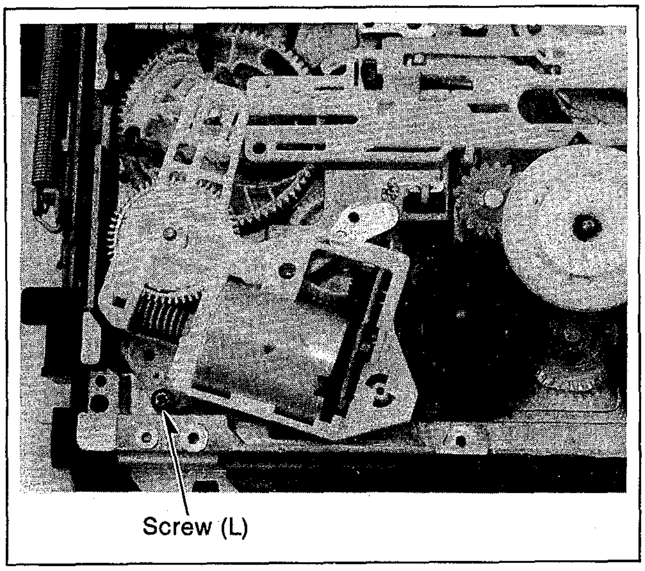


Fig. K11

2–4–12. ASSEMBLY OF THE TIMING BELT & SS BRAKE BASE

1) Install the TIMING BELT.

2) Put the TIMING BELT onto the TENSION ROLLER, slide the SS BRAKE BASE into position and install 2 screws(M).

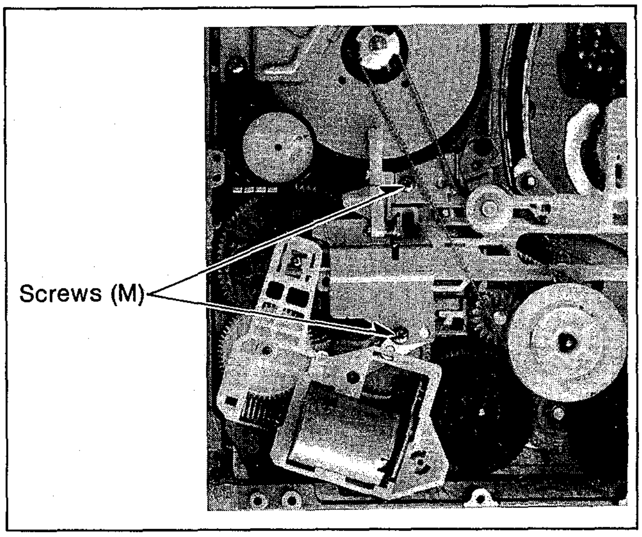


Fig. K12

2–4–13. ASSEMBLY OF THE PINCH ARM UNIT

1) Install the OPENER PIECE by inserting the boss into the PINCH ARM UNIT. Push down until the lock engages the shaft.

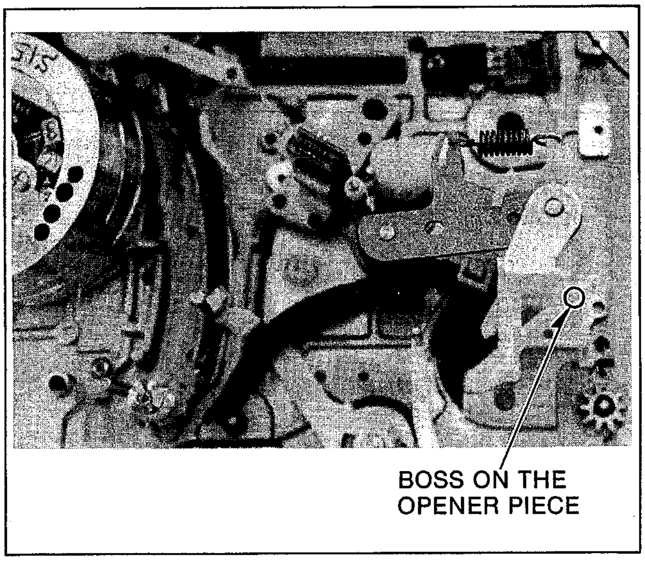


Fig. K13

2–4–14. CHECKING THE MECHANISM MOVEMENT

1) Check by moving the mechanism by hand then re–check using a battery to power the motor.

2) Rotate the LOADING MOTOR by hand in the loading direction while checking the movement of each gear. If the mechanism operates correctly when moved by hand, connect a battery to the LOADING MOTOR and re–check the movement of each gear as shown in Fig.S1/S2/S3.

3) Connect the battery to check the loading operation and then reverse the battery connection to check the unloading operation.

4) Reverse the battery to move the mechanism to the cassette down position.

2–4–15. ASSEMBLY OF THE CASSETTE HOLDER

1. A SSEMBLE A CASSETTE HOLDER AS A UNIT COMPLETE UNIT

1) Put the CASSETTE HOLDER into the cassette up condition by moving the WIPER ARM.
2) Turn the LOADING MOTOR by hand in the unloading direction until the CARRIAGE CONNECTION GEAR and the MODE SW is eject position as shown in Fig.K14/K15

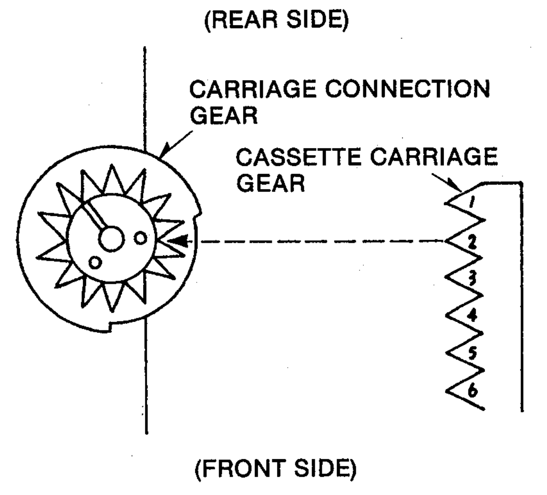


Fig. K14

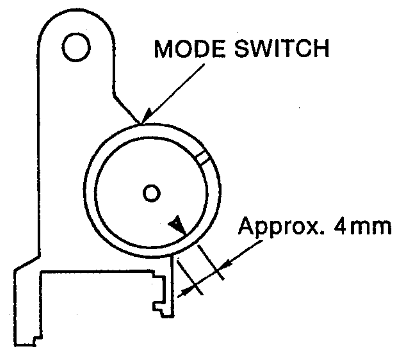


Fig. K15

3) Install the CASSETTE HOLDER UNIT as shown in Fig.K14.
4) Install 4 screws to attach the CASSETTE HOLDER UNIT.

<Eject Operation>

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>
If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear will not rotate.
For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate to the carriage connection gear by hand in the direction of the arrow.

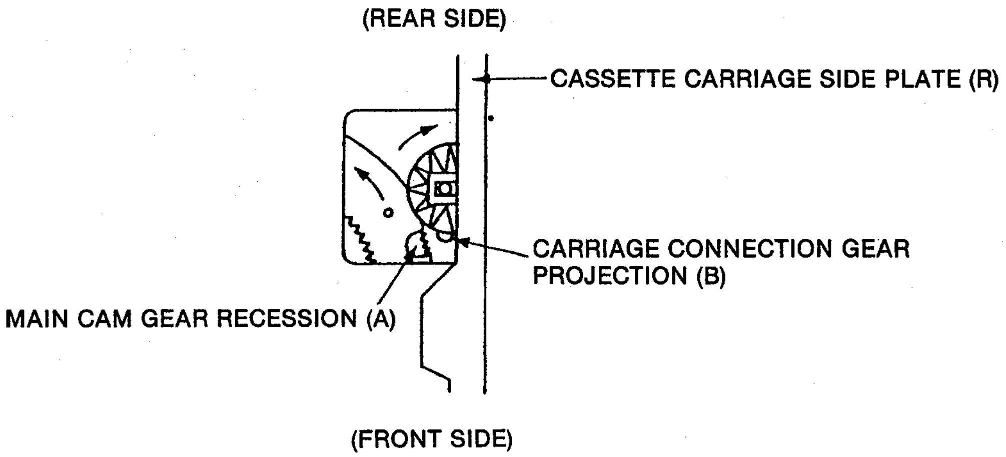

(REAR SIDE)
CASSETTE CARRIAGE SIDE PLATE (R)
CARRIAGE CONNECTION GEAR PROJECTION (B)
MAIN CAM GEAR RECESSION (A)
(FRONT SIDE)

Fig. K16 Top View of Eject Operation

2. ASSEMBLE A CASSETTE HOLDER SEPARATELY

1) Put the CASSETTE HOLDER into the cassette down position by moving the WIPER ARM. Check the position of the WIPER ARM and RACK A. The mark of RACK A aligns with the mark on the WIPER ARM.

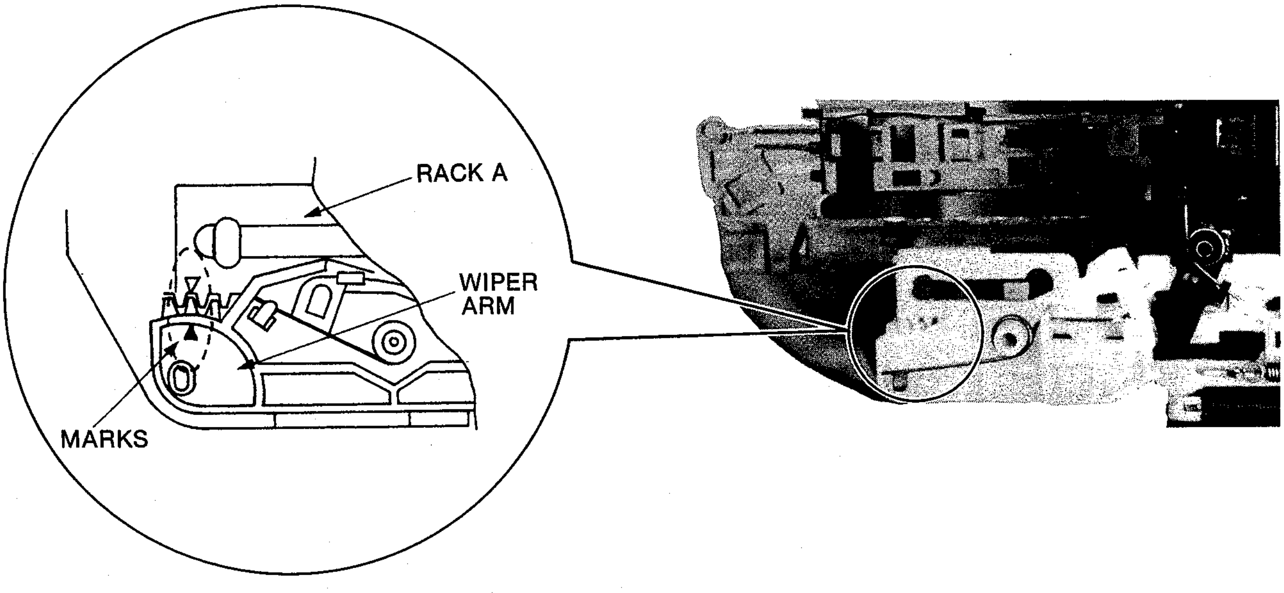

RACK A
WIPER ARM
MARKS

Fig. K17

2) Install the SIDE PLATE ASSEMBLY so that the first gear of RACK B aligns with the mark on the CARRIAGE CONNECTION GEAR.

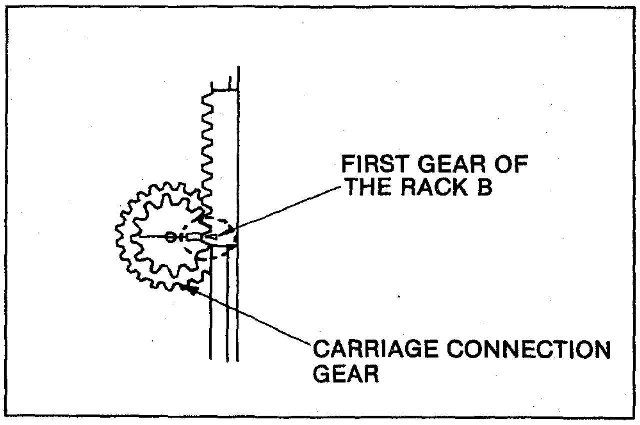


Fig. K18

3) Install 4 screws to attach the SIDE PLATE ASSEMBLY.

4) Turn the LOADING MOTOR by hand to the cassette up position while pushing the WIPER ARM to the cassette up position.

5) Insert the 5 posts on the CASSETTE HOLDER into the Side Plate.

6) Set the TOP PLATE on the Side Plate then push it down until it locks.

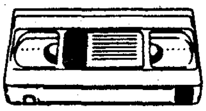
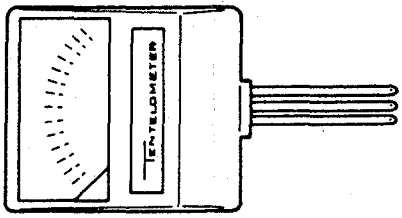
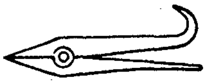
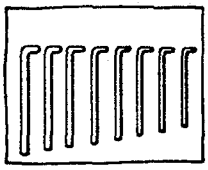
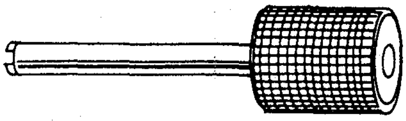
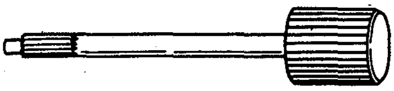
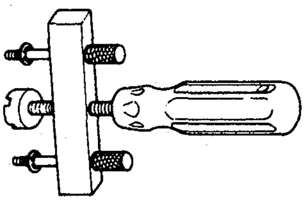
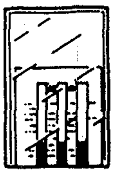
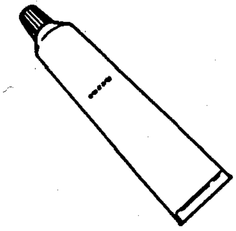
2–4–16. ASSEMBLY OF THE MECHANISM CHASSIS

1) Install the MECHANISM CONNECTION C.B.A. onto the chassis. Then install the chassis into the frame and connect all the cables and connectors.

2) Clean the DD CYLINDER after reinstallation.

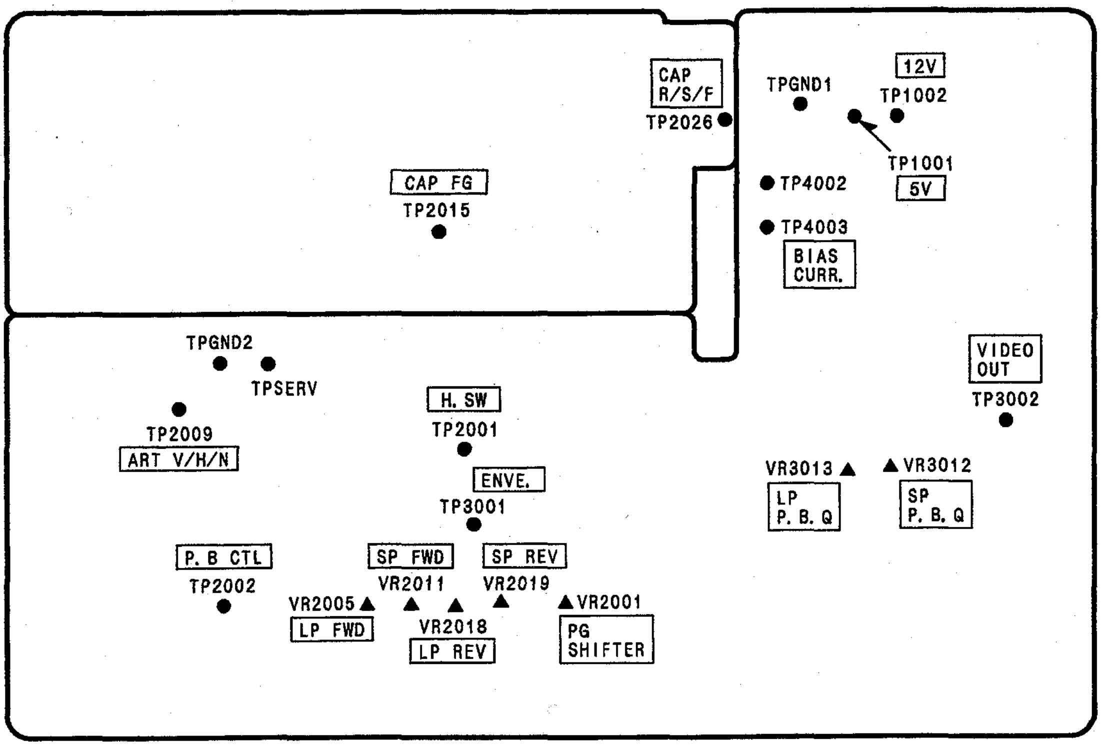
3) Insert a cassette and adjust the tape travel and check all the operation modes.

Servicing Fixtures & Tools

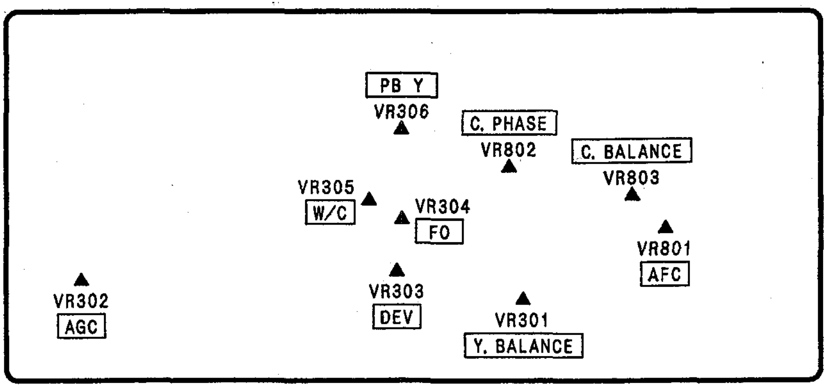
VFJ8125H3F PAL VHS Alignment Tape VFM8080HQFP NTSC VHS Alignment Tape 	VFK0132 Back Tension Meter (Tentelometer, Made in U.S.A.) 	VFK0335 Retaining Ring Remover (3mm/4mm) 
VFK0326 Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0mm) 	VFK0329 Post Adjustment Screw Driver 	VFK0330 Fine Adjustment Gear Driver 
VFK0341 Upper Cylinder Remover 	VFK27 Hand Cleaning Stick 	MOR265 Morlytone Grease 

LOCATION OF TEST POINTS & CONTROLS

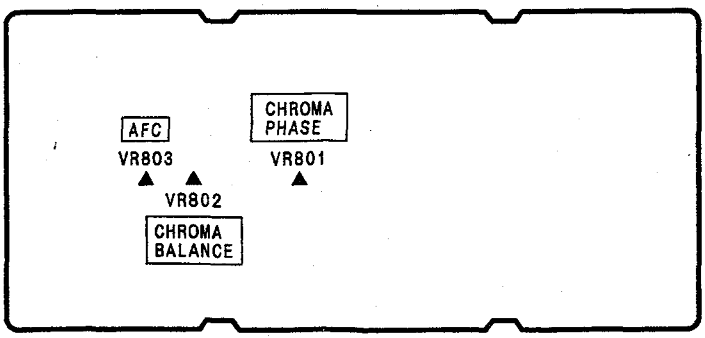
MAIN C.B.A.


CAP R/S/F
TP2026
TPGND1
12V
TP1002
TP1001
5V
CAP FG
TP2015
TP4002
TP4003
BIAS CURR.
VIDEO OUT
TP3002
TPGND2
TPSERV
TP2009
ART V/H/N
H. SW
TP2001
ENVE.
TP3001
VR3013
VR3012
LP P. B. Q
SP P. B. Q
P. B CTL
TP2002
SP FWD
VR2011
SP REV
VR2019
VR2005
LP FWD
VR2018
LP REV
VR2001
PG SHIFTER

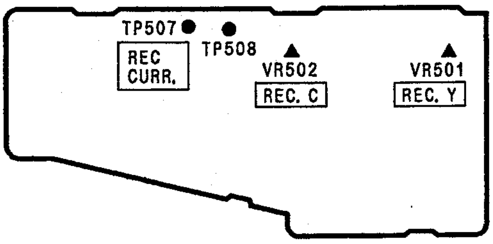
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03A01CPE/FPE: NV-SD30EO, SD40EO)


PB Y
VR306
C. PHASE
VR802
C. BALANCE
VR803
VR305
W/C
VR304
FO
VR801
AFC
VR302
AGC
VR303
DEV
VR301
Y. BALANCE

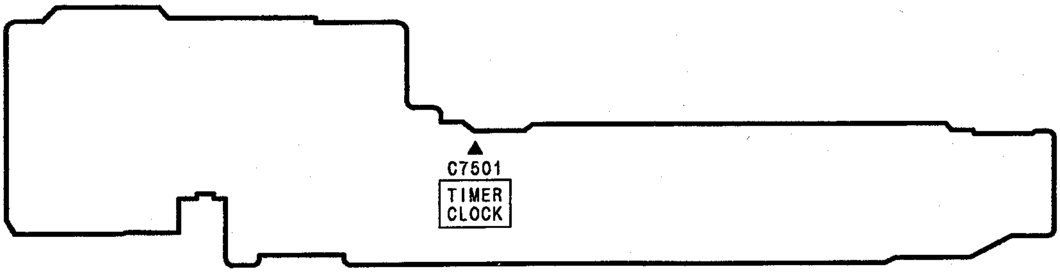
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03975K/J: NV-SD30EO/EV, SD40EO/EV)


AFC
VR803
CHROMA PHASE
VR801
VR802
CHROMA BALANCE

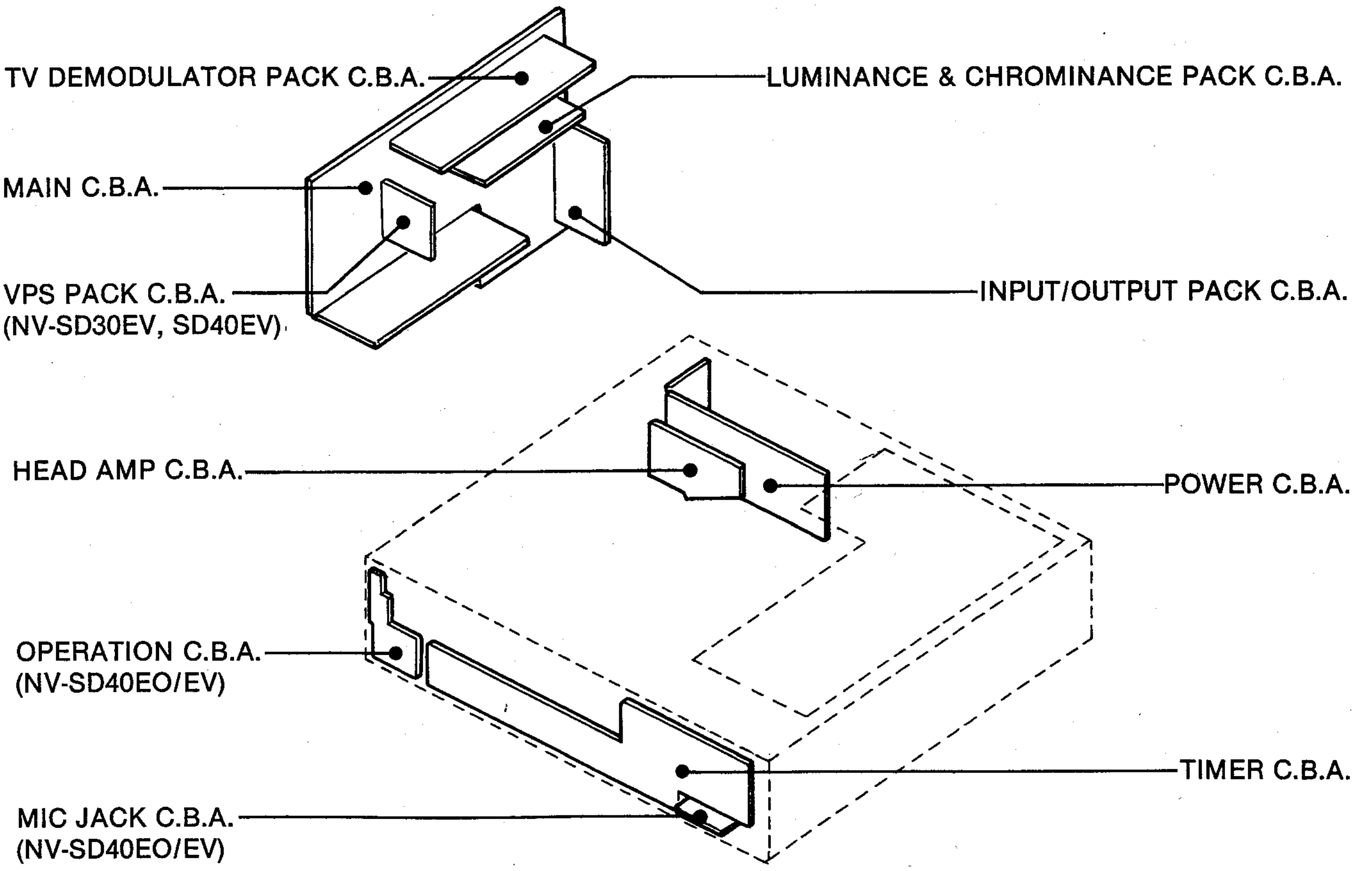
HEAD AMP C.B.A.


TP507
TP508
REC CURR.
VR502
REC. C
VR501
REC. Y

TIMER C.B.A.


C7501
TIMER CLOCK

CIRCUIT BOARD LAYOUT


TV DEMODULATOR PACK C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.
MAIN C.B.A.
VPS PACK C.B.A.
(NV-SD30EV, SD40EV)
INPUT/OUTPUT PACK C.B.A.
HEAD AMP C.B.A.
POWER C.B.A.
OPERATION C.B.A.
(NV-SD40EO/EV)
TIMER C.B.A.
MIC JACK C.B.A.
(NV-SD40EO/EV)

2-5. ELECTRICAL ADJUSTMENT PROCEDURES

2–5. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete adjustment procedures required for electric circuits of VHS Video Cassette Recorders.

2–5–1. TEST EQUIPMENT

To perform electrical adjustments following equipment is required.

1. Dual–Trace Oscilloscope. (More than 35 MHz)
    Voltage Range: 0.005–5V/div
    Frequency Range: DC–35MHz
    Probes: 10: 1
2. Frequency Counter.
    Frequency Range: 0–10MHz
    Probes: 1: 1
3. Universal Counter.
4. Vacuum Tube Volt Meter. (V.T.V.M.)
5. Video Sweep Generator.
6. Sine Wave Generator.
7. Video Pattern Generator.
8. VHS Alignment Tape. (VFJ8125H3F)
9. VHS Blank Tape.
10. Monitor.
11. Plastic Tip Driver.
12. DC Power Supply

2–5–2. PREPARATION

During adjustment, set each selector as follows: when no indication in the procedure.

TEST SIGNAL SW (REAR).....OFF
TAPE SPEED.....SP

2–5–3. HOW TO READ ADJUSTMENT PROCEDURES

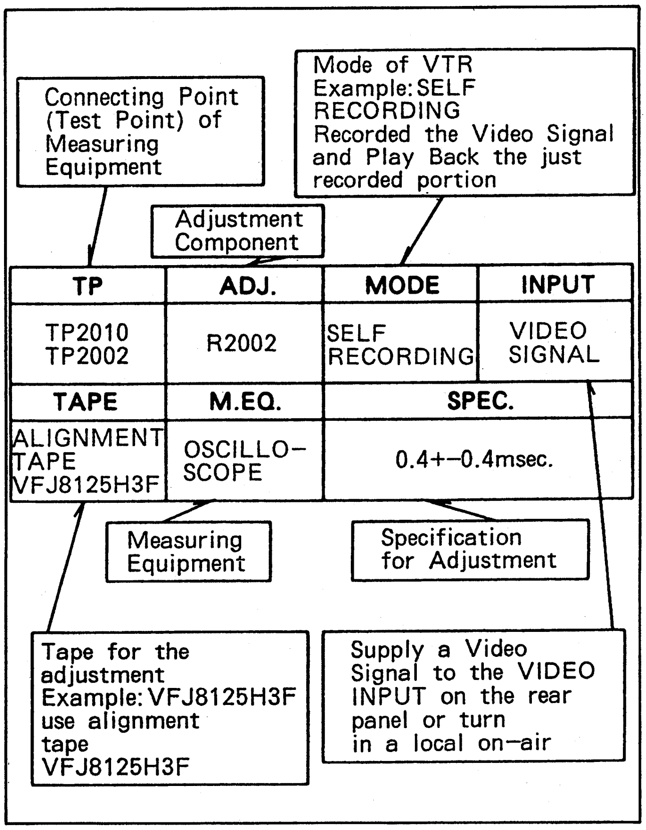

Connecting Point (Test Point) of Measuring Equipment
Mode of VTR Example: SELF RECORDING Recorded the Video Signal and Play Back the just recorded portion
Adjustment Component
TP
ADJ.
MODE
INPUT
TP2010 TP2002
R2002
SELF RECORDING
VIDEO SIGNAL
TAPE
M.EQ.
SPEC.
ALIGNMENT TAPE VFJ8125H3F
OSCILLO–SCOPE
0.4+–0.4msec.
Measuring Equipment
Specification for Adjustment
Tape for the adjustment Example: VFJ8125H3F use alignment tape VFJ8125H3F
Supply a Video Signal to the VIDEO INPUT on the rear panel or turn in a local on–air

Fig. E1

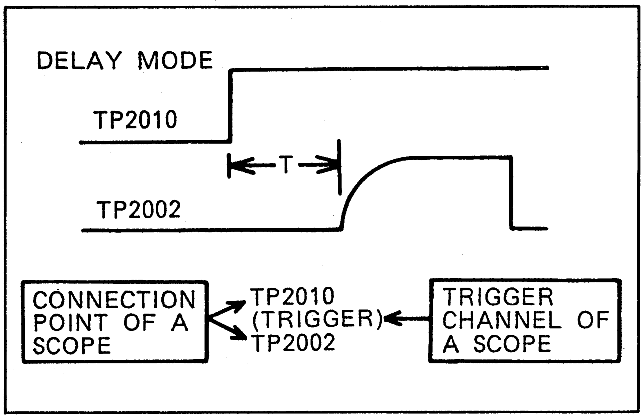

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010
(TRIGGER)
TP2002
TRIGGER CHANNEL OF A SCOPE

Fig. E2

SERVO SECTION

2-5-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAYBACK	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	6.5+-0.5(H) [NV-SD30EO/EV] 7.0+-0.5(H) [NV-SD40EO/EV]	

1. Connect the oscilloscope to TP2001(H.SW) and TP3002(V.OUT)
2. Playback the alignment tape.
3. Adjust VR2001 so that phase difference between falling edge of Head SW pulse and V-Sync is 6.5+-0.5(H) [NV-SD30EO/EV] / 7.0+-0.5(H) [NV-SD40EO/EV].

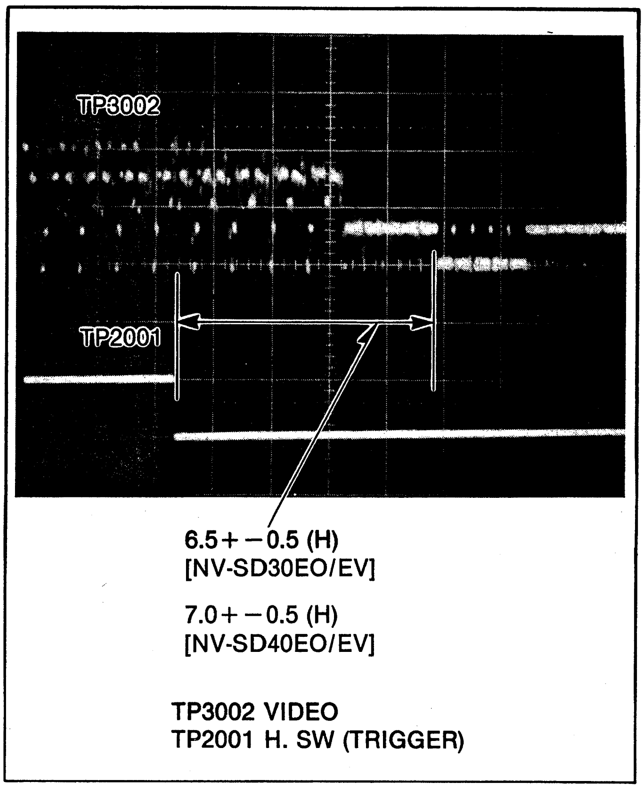

TP3002
TP2001
6.5+-0.5 (H)
[NV-SD30EO/EV]
7.0+-0.5 (H)
[NV-SD40EO/EV]
TP3002 VIDEO
TP2001 H. SW (TRIGGER)

Fig. E3

2-5-5. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2011(SP) VR2006(LP)	SP (SELF RECORDED) STILL	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	MONITOR TV	A=B (A+B)/V<1/6	

1. Short out the cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by pressing search button on Remote Controller Unit.
4. Adjust VR2011(SP)(VR2006(LP)) until noise bar on the monitor screen is minimized.(Detail specifications are shown in Fig.E5)
5. Disconnect the short across jumper wire.

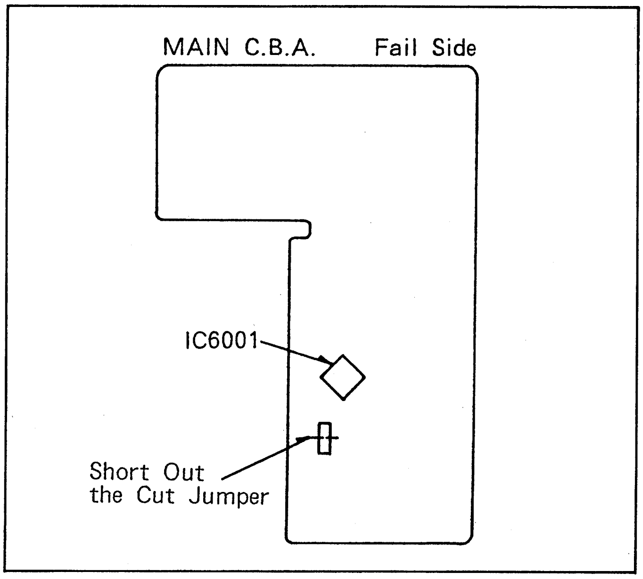

MAIN C.B.A.
Fail Side
IC6001
Short Out
the Cut Jumper

Fig. E4

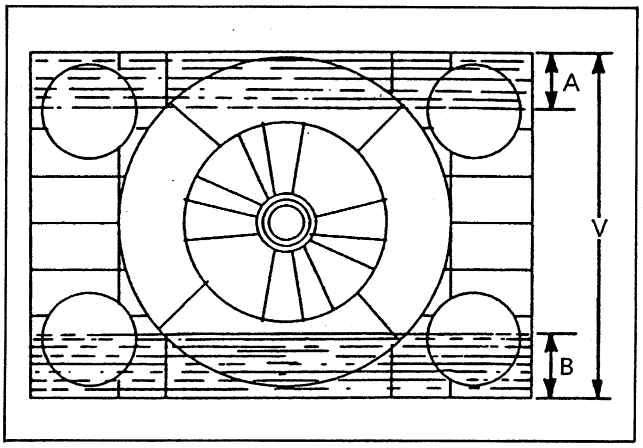


Fig. E5

2–5–6. REVERSE SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2019(SP) VR2018(LP)	REVERSE SLOW	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	MONITOR TV	SP: A=B (A+B)/V=<1/6 LP: A=0 B/V=<1/3	

1. Short out the cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by pressing search button on Remote Controller Unit.
4. Adjust VR2019(SP)(VR2018(LP)) until noise bar on the monitor screen in minimized. (Detail specifications are shown in Fig.E5)
5. Disconnect the short across jumper wire.

LUMINANCE & CHROMINANCE SECTION FOR NV-SD30EO/EV, SD40EO/EV
[MAIN C.B.A.
(VEP03971Q: NV-SD30EO/EV)
(VEP03971P: NV-SD40EO/EV)
LUMINANCE & CHROMINANCE PACK C.B.A.
(VEP03975K: NV-SD30EO/EV)
(VEP03975J: NV-SD40EO/EV)
HEAD AMP C.B.A.
(VEP05180B: NV-SD30EO/EV)
(VEP05180A: NV-SD40EO/EV)]

2–5–7. ARTIFICIAL NTSC AFC FREE RUN ADJUSTMENT (NV–SD40EO/EV)

TP	ADJ.	MODE	INPUT
PIN (9) of IC802	VR803	STOP	SINEWAVE 8KHz –10dB (316mV)
TAPE	**M. EQ.**	**SPEC.**	
×	FREQUENCY COUNTER SINEWAVE GENERATOR	15735+–100(Hz)	

Note:
Supply +5V DC to Pin 27 of IC802.

1. Supply a sinewave (8KHz/–10dB) to Line In. (Video In)
2. Connect the frequency counter to Pin 9 of IC802.
3. Turn VR803 to maximum frequency.
4. Adjust VR803 so the frequency is 15735+–100(Hz).

2-5-8. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501(Y) VR502(C)	RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	Y:150+-5(mVp-p) C:37+-2(mVp-p) [NV-SD30EO/EV] Y:130+-5(mVp-p) C:32+-2(mVp-p) [NV-SD40EO/EV]	

1. Record the colour bar.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Adjust VR501 so the amplitude of sync tip portion is 150 +- 5mVp-p [NV-SD30EO/EV]/ 130+-5mVp-p[NV-SD40EO/EV].
4. Supply +5V DC to PP3001-6 to reduce luminance component.
5. Adjust VR502 until the amplitude of Cyan is 37+-2mVp-p [NV-SD30EO/EV] / 32+-2mVp-p [NV-SD40EO/EV].

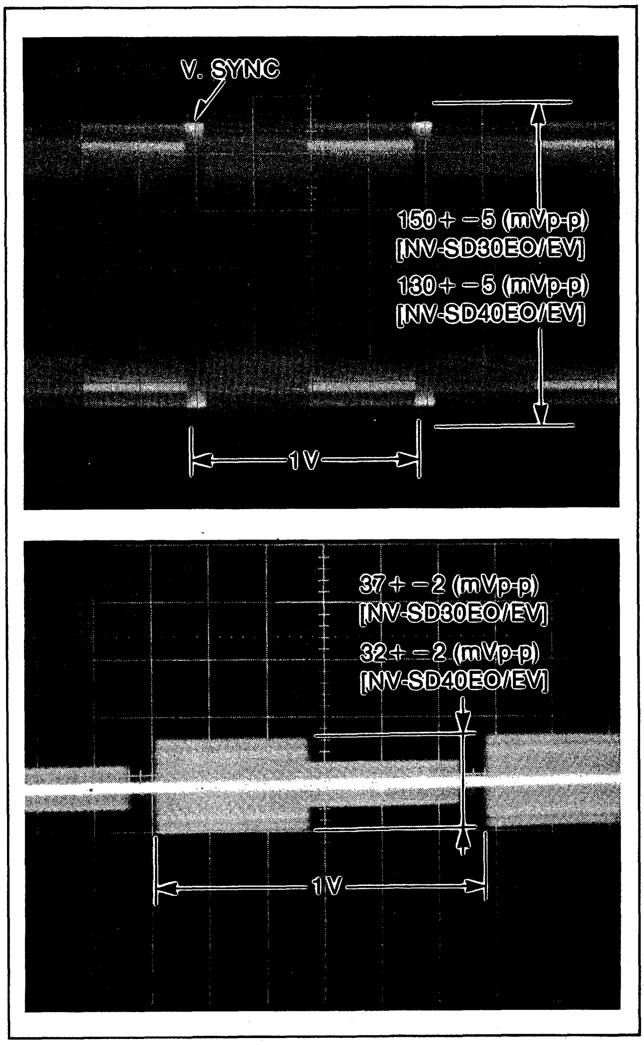


Fig. E6

2-5-9. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012(SP) VR3013(LP)	(SELF RECORDED) PLAYBACK (SP/LP)	VIDEO SWEEP SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE VIDEO SWEEP GENERATOR	SP:0+-1(dB) (90 - 110%) LP:0+-1(dB) (90 - 110%)	

Note:
(1) Set the Video Sweep Signal as shown in Fig.E7.

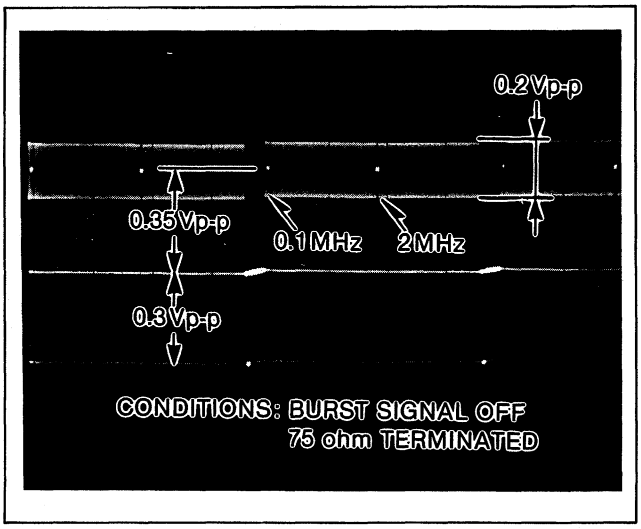


Fig. E7

1. Record the Video Sweep Signal in SP/(LP) mode for a few minutes and playback the just recorded signal.
2. Connect the oscilloscope to TP3002.
3. Adjust VR3012(SP)(VR3013(LP)) until the frequency response level is 0+-1dB at 2MHz portion by comparing with 0.1MHz portion.

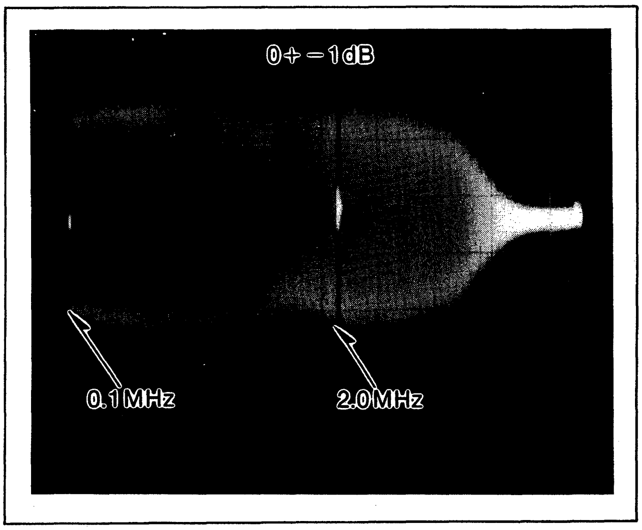


Fig. E8

2–5–10. CHROMINANCE RECURSIVE ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC301–17	VR801 VR802	SELF REC&PB	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO- SCOPE	MINIMIZE AMPLITUDE	

1. Record the colour bar and play back the just recorded portion.
2. Adjust VR801 and VR802 until the amplitude of the signal at the Pin 17 of IC301 is minimum.

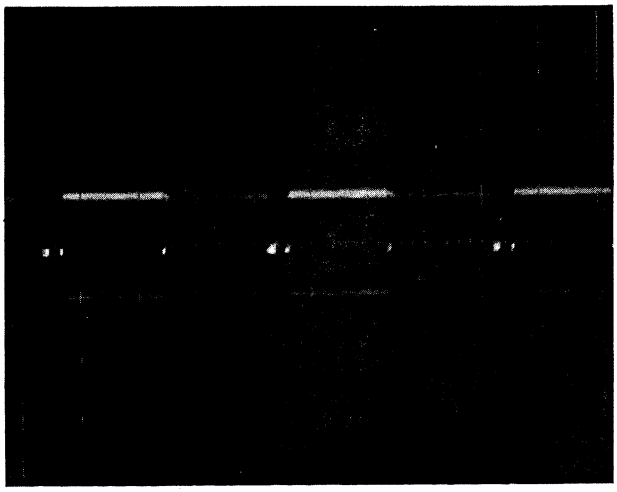


Fig. E9 Before adjustment.

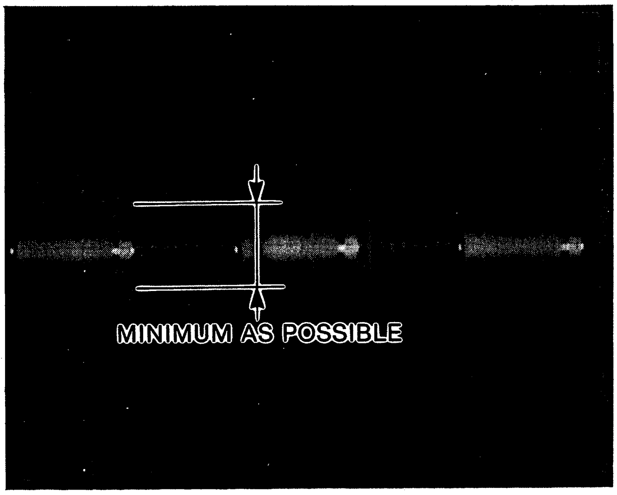


Fig. E10 After adjustment.

LUMINANCE & CHROMINANCE SECTION FOR NV-SD30EO, SD40EO

[MAIN C.B.A.
(VEP03971N: NV-SD30EO)
(VEP03971M: NV-SD40EO)
LUMINANCE & CHROMINANCE PACK C.B.A.
(VEP03A01CPE: NV-SD30EO)
(VEP03A01FPE: NV-SD40EO)
HEAD AMP C.B.A.
(VEP05180APE: NV-SD30EO)
(VEP05180BPE: NV-SD40EO)]

2–5–11. AGC ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR302	STOP	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO– SCOPE	2.0+–0.06(Vp–p)	

1. Supply the colour bar signal to video input.
2. Conect the oscilloscope to video output(from the AV21–pin) (unterminated).
3. Adjust VR302 so that the video output signal level is 2.0+–0.06Vp–p.

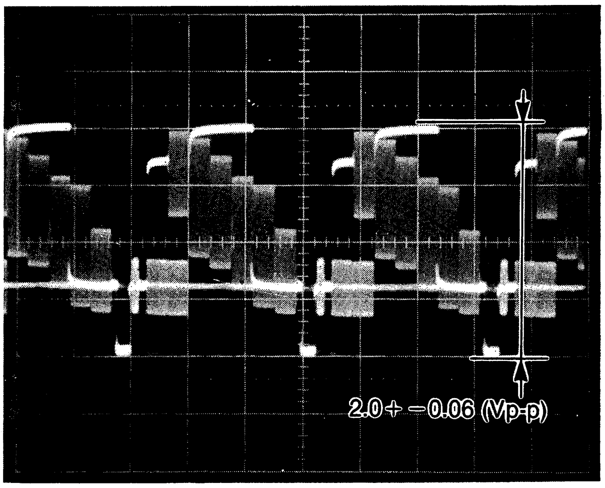


Fig. E11

2–5–12. WHITE CLIP ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN(80) OF IC302	VR305	RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	WHITE CLIP LEVEL 190+5/−3%	

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to PIN(80) of IC302.
3. Record the colour bar signal.
4. Adjust VR305 so that the white clip level is 190+5/−3%.

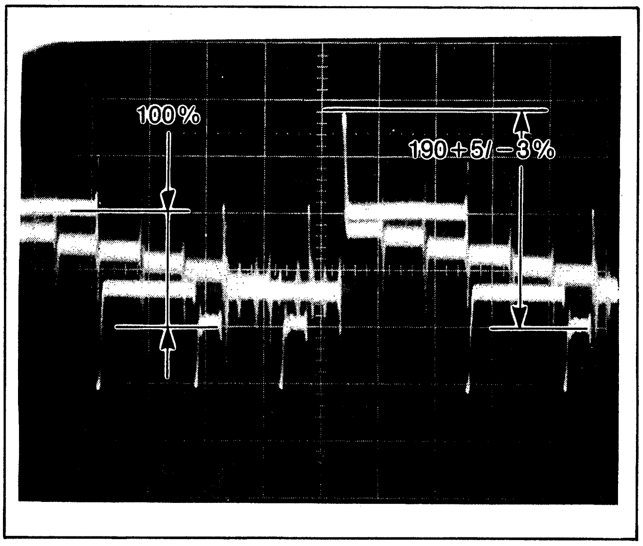


Fig. E12

2–5–13. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR303 VR304	(SELF RECORDED) PLAYBACK	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	Y:2.0+−0.1(Vp−p)	

Note :

Before this adjustment, the PLAYBACK LEVEL ADJUSTMENT(2–5–16) must be adjusted.

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to video output.
3. Record the colour bar signal and adjust VR303 and VR304 during recording.
4. Playback the just recorded portion and confirm the playback Y−signal level is 2.0+−0.1Vp−p. If the signal level is out of the specification, repeat 3. and 4. until the signal level becomes the specification.

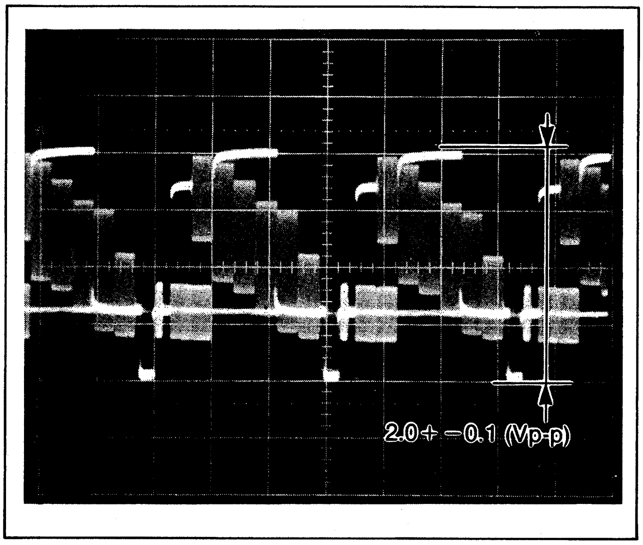


Fig. E13

2–5–14. Y–NR BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN(71) OF IC302	VR301	STOP	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	MINIMIZED AS POSSIBLE	

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to PIN(71) of IC302.
3. Adjust VR301 so that the video signal level is minimized.

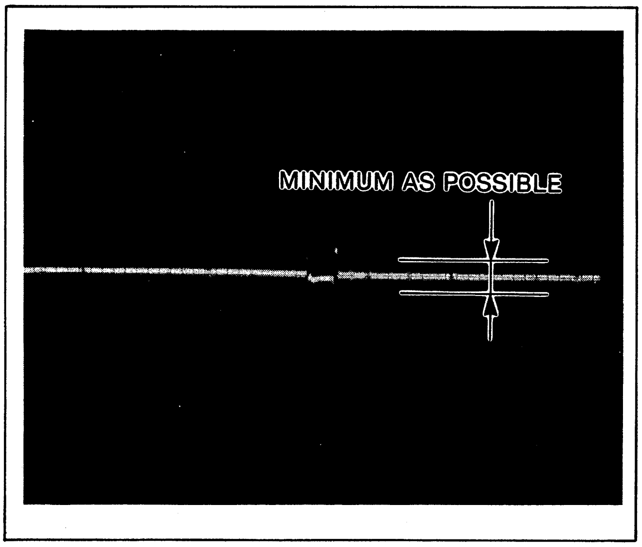


Fig. E14

2–5–15. ARTIFICIAL NTSC AFC FREE RUN ADJUSTMENT (NV–SD40EO)

TP	**ADJ.**	**MODE**	**INPUT**
PIN(9) OF IC801	VR801	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	DC POWER SUPPLY FREQUENCY COUNTER	15735Hz+–100Hz	

1. Supply +5V DC to PIN(29) of IC801.
2. Connect the frequency counter to TL801.
3. Adjust VR801 so that the frequency is 15735Hz+–100Hz.

2–5–16. PLAYBACK LEVEL ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
VIDEO OUT	VR306	PLAYBACK	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO–SCOPE	Y: 2.0+–0.1Vp–p CYAN: 1.1+–0.2Vp–p	

1. Connect the oscilloscope to video output.
2. Playback the alignment tape (colour bar portion).
3. Adjust VR306 so that the playback signal level is as follows.

Y–LEVEL : 2.0+–0.1Vp–p
CYAN–LEVEL : 1.1+–0.2Vp–p

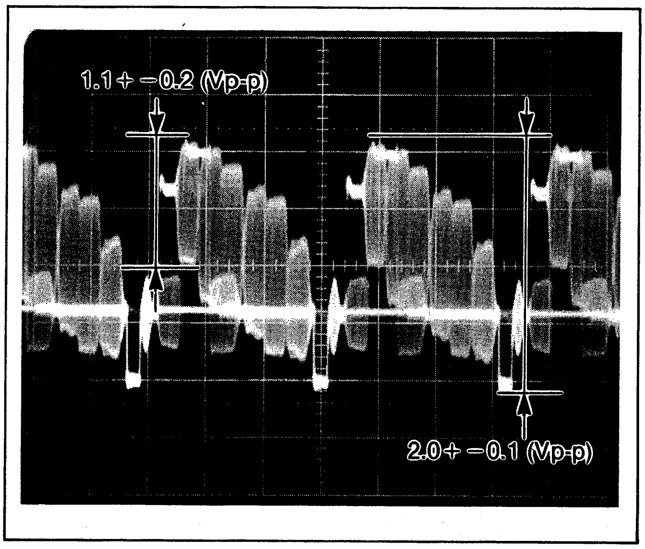


Fig. E15

2–5–17. C–NR ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
PIN(42) OF IC302	VR802 VR803	SELF REC&PB	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO–SCOPE	MINIMIZE AMPLITUDE	

1. Record the colour bar signal and playback the just recorded portion.
2. Connect the oscilloscope to PIN(42) of IC302.
3. Adjust VR802 and VR803 until the signal is minimum.

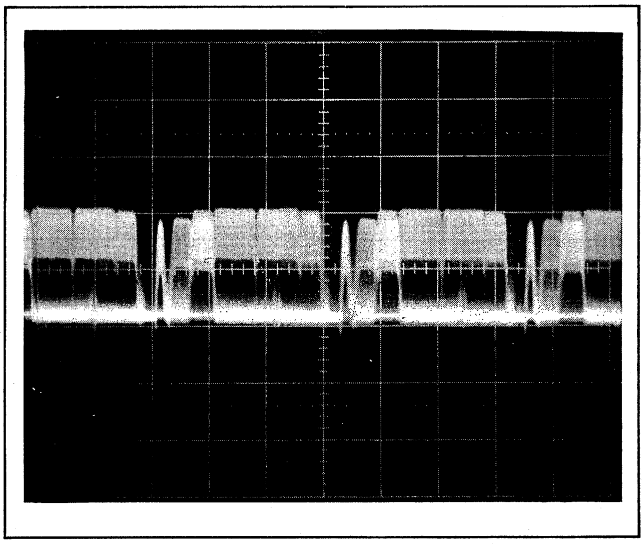


Fig. E16 Before adjustment

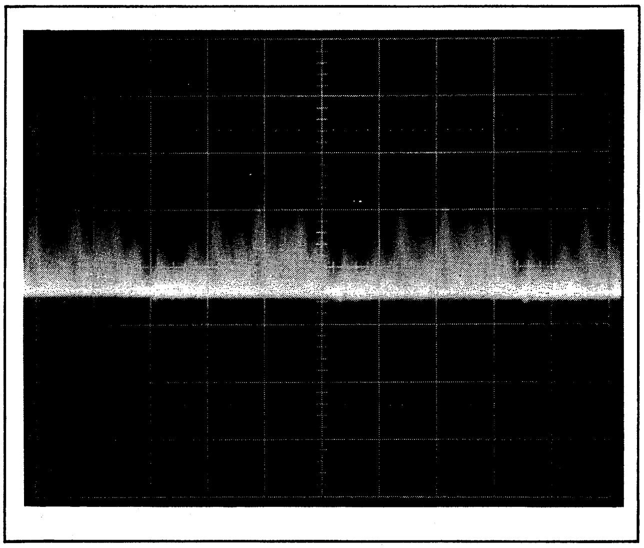


Fig. E17 After adjustment

2–5–18. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501(Y) VR502(C)	RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO–SCOPE	Y:150+–5(mvp–p) C:37+–2(mVp–p) [NV–SD30EO] Y:130+–5mVp–p C:32+–2(mVp–p) [NV–SD40EO]	

1. Record the colour bar signal.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Adjust VR501 so the amplitude of sync tip portion is 150 +– 5mVp–p [NV–SD30EO] 130+–5mVp–p[NV–SD40EO].
4. Supply +5V DC to PP3001–6 to reduce luminance component.
5. Adjust VR502 until the amplitude of Cyan is 37+–2mVp–p [NV–SD30EO] / 32+–2mVp–p [NV–SD40EO].

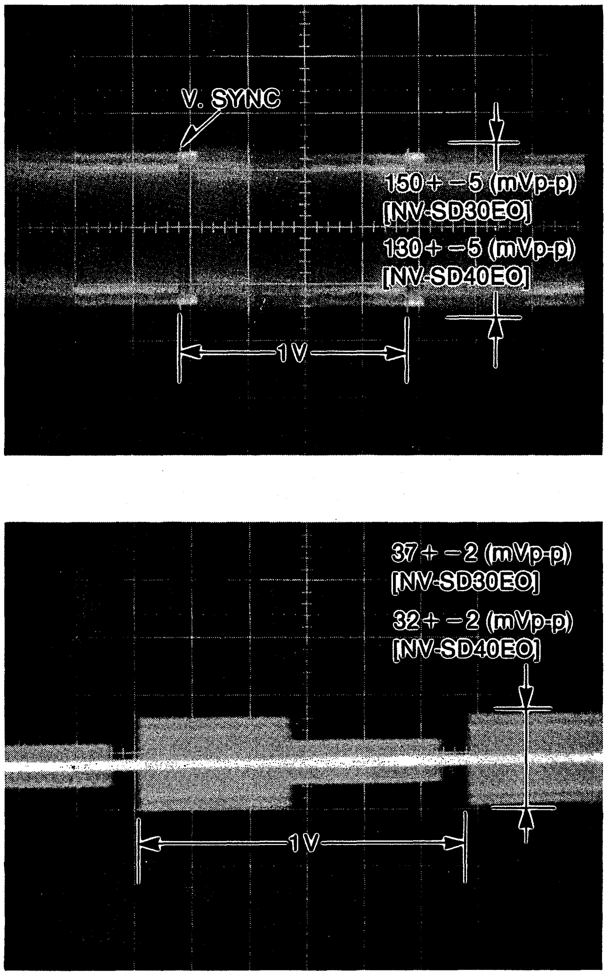


Fig. E18

2–5–19. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012(SP) VR3013(LP)	(SELF RECORDED) PLAYBACK (SP/LP)	VIDEO SWEEP SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO–SCOPE VIDEO SWEEP GENERATOR	SP:0+–1(dB) (90 – 110%) LP:0+–1(dB) (90 – 110%)	

Note:

(1) Set the Video Sweep Signal as shown in Fig.E14.

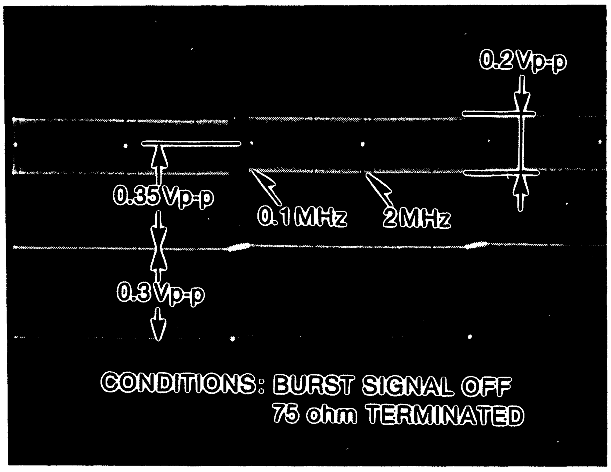


Fig. E19

1. Record the Video Sweep Signal in SP/(LP) mode for a few minutes and playback the just recorded signal.
2. Connect the oscilloscope to TP3002.
3. Adjust VR3012(SP)(VR3013(LP)) until the frequency response level is 0+–1dB at 2MHz portion by comparing with 0.1MHz portion.

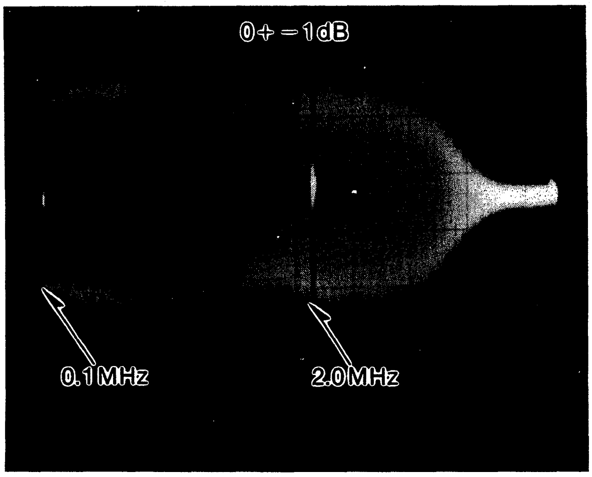


Fig. E20

AUDIO SECTION

2-5-20. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M.	2.8+–0.1(mVrms) [NV–SD30EO/EV] 2.9+–0.1(mVrms) [NV–SD40EO/EV]	

Note:
Connect the Audio input and GND.

1. Place the unit in SP recording mode.
2. Connect the V.T.V.M. to TP4002(HOT) and TP4003(GND).
3. Adjust VR4002 so reading of V.T.V.M. is 2.8+–0.1mVrms [NV–SD30EO/EV]/ 2.9+–0.1(mVrms) [NV–SD40EO/EV].

TIMER SECTION

2-5-21. TIMER REFERENCE CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7501–28	C7501	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	UNIVERSAL COUNTER	7812.5+–0.015(us)	

1. Connect the universal counter to TP7501–28.
2. Adjust C7501 so the reading of universal counter is 7812.5+–0.015us.

Memo

SECTION 3
ABBREVIATIONS & BLOCK DIAGRAMS

3-1. ABBREVIATIONS

443NT [L]	4.43 NTSC Ⓛ
A. COMP	AUDIO COMPONENT SIGNAL
A. COMPO	AUDIO COMPONENT SIGNAL
A. D.P [L]	AUDIO DUBBING PAUSE Ⓛ
A. D/L [L]	AUDIO DUBBING PAUSE Ⓛ
A. DEF [S]	AUDIO DEFEAT
A. DEF [S] [L]	AUDIO DEFEAT
A. DUB P [L]	AUDIO DUBBING PAUSE Ⓛ
A. DUB [H]	AUDIO DUBBING Ⓗ
A. ERASE	AUDIO ERASE
A. H. SW	AUDIO HEAD SWITCHING PULSE
A. HEAD [R]	AUDIO HEAD (REC)
A. HEAD [W]	AUDIO HEAD (PLAY)
A. IN [L]	AUDIO INPUT (L)
A. IN [R]	AUDIO INPUT (R)
A. MUT [H]	AUDIO MUTE Ⓗ
A. MUTE [H]	AUDIO MUTE Ⓗ
A. OUT [L]	AUDIO OUTPUT (L)
A. OUT [R]	AUDIO OUTPUT (R)
A. RF OUT	AUDIO RF SIGNAL OUTPUT
A/VS/S. DATA	AV SW/SERIAL DATA
AC ONLINE	AC ONLINE
AC. O/EE. H	AC ONLINE/EE Ⓗ
AFC S C	AFC S CURVE
AFC [S]	AFC S CURVE
AFC. DEF	AFC DEFEAT
ARFC OUT	AUDIO RF SIGNAL OUTPUT
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL Ⓗ/NORMAL
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE
AUDIO IN [L]	AUDIO INPUT (L)
AUDIO IN [R]	AUDIO INPUT (R)
AUDIO OUT [L]	AUDIO OUTPUT (L)
AUDIO OUT [R]	AUDIO OUTPUT (R)
AUDIO SELECT [H]	AUDIO SELECT Ⓗ
AUDIO. L	AUDIO (L)
AUDIO. R	AUDIO (R)
AV CNT	AV CONTROL
AV CTL	AV CONTROL
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK
AV. C.M.	AV CONTROL MODE
AVCNT/METER. R	AV CONTROL/LEVEL METER (R)
AVSW/METER. L	AV SW/LEVEL METER (L)
B MODE. H	B MODE Ⓗ
B.G.P	BURST GATE PULSE
BACKUP 5V	BACK UP 5V
BAND. U.E.	BAND U
BANDVL. D	BAND VL
BI/MI [L]	BILINGUAL/MIX Ⓛ
BIL	BILINGUAL
BIL [L]	BILINGUAL Ⓛ

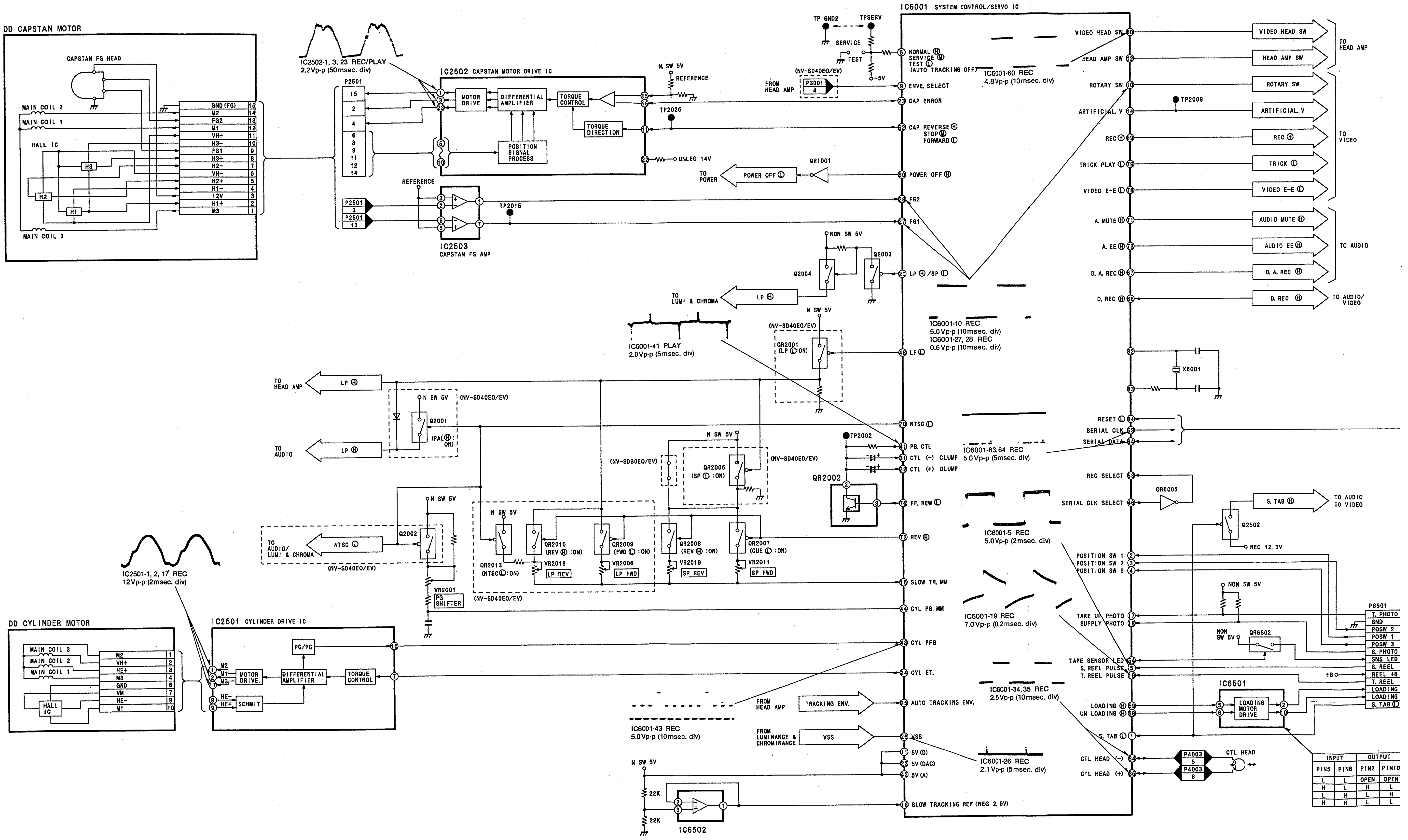
BIL. [H]	BILINGUAL Ⓗ
BIL/M1 [L]	BILINGUAL Ⓛ
BS CLOCK	BS CLOCK
BS DATA	BS DATA
BS LCH IN	BS L CHANNEL INPUT
BS MIX [H]	BS MIX Ⓗ
BS MON [H]	BS MONITOR Ⓗ
BS MONI [H]	BS MONITOR Ⓗ
BS RCH IN	BS R CHANNEL INPUT
BS VIDEO	BS VIDEO SIGNAL
BS VIDEO/BS1	BS VIDEO SIGNAL
BS [H]	BS Ⓗ
BS. LEVEL	BS LEVEL
BS. M [H]	BS MONITOR Ⓗ
BS/VTR [H]	BS/VTR Ⓗ
BUS CLK	BUS CLOCK
BUS LSN	BUS LISTEN
BUS TLK	BUS TALK
BUZZER	BUZZER
CAP EC	CAPSTAN TORQUE CONTROL
CAP M GND	CAPSTAN MOTOR GND
CAP. ET	CAPSTAN TORQUE CONTROL
CAP. FG1	CAPSTAN FG1 PULSE
CAP. FG2	CAPSTAN FG2 PULSE
CAS. SW	CASSETTE SW
CCN	PLAYBACK CONTROL SIGNAL (−)
CCP	PLAYBACK CONTROL SIGNAL (+)
CHM	CONTROL SIGNAL (+)
CHP	CONTROL SIGNAL (−)
CINEM [L]	CINEMA Ⓛ
CINEMA [L]	CINEMA Ⓛ
CINEMA/MIX	CINEMA/MIX
CKL	RATCH LOCK
CKS	SHIFT LOCK
CL	CLOCK
CLK	CLOCK
CLK (C.G)	CLOCK
CLOCK. IN	CLOCK INPUT
CLP	CLAMP
COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
COLOR [H]	COLOUR Ⓗ
CONV	CONVERTOR
CS	CHIP SELECT
CTL GND	CONTROL GND
CTL HEAD [+]	CONTROL HEAD (+)
CTL HEAD [−]	CONTROL HEAD (−)
CTL [+]	CONTROL HEAD (+)
CTL [−]	CONTROL HEAD (−)
CUE BIAS	CUE BIAS
CURRENT LIM	CURRENT LIMMITER
CYL ET	CYLINDER TORQUE CONTROL
CYL GND	CYLINDER GND
D.F.M. REC [H]	DELAIED FM RECORDING Ⓗ
D. FM REC [L]	DELAIED FM RECORDING Ⓛ
D. GND	DIGITAL GND

D. REC [H]	DELAYED RECORDING Ⓗ	H. SYNC	HORIZONTAL SYNC
D4/S. LED	D4/STILL LED	H. AMP. SW	HEAD AMP SW PULSE
D4/STILLED	D4/STILL LED	H. P <R>	HEAD PHONE (R)
DAC [CLK]	TUNER DAC (CLOCK)	H. P <L>	HEAD PHONE (L)
DAC/FSCS	TUNER DAC/FS CHIP SELECT	H. P GND	HEAD PHONE GND
DAREC [H]	DELAYED AUDIO RECORDING Ⓗ	H. P OUT [L]	HEAD PHONE OUTPUT (L)
DATA	DATA	H. P OUT [R]	HEAD PHONE OUTPUT (R)
DECODER [L]	DECODER (L)	H. SW	HEAD SW PULSE
DECODER [R]	DECODER (R)	HEAD PHONE [L]	HEAD PHONE (L)
DEW	DEW	HEAD PHONE [R]	HEAD PHONE (R)
DEW SNS	DEW SENSOR	HEAD SW	HEAD SW
DFMRE [H]	DELAYED FM AUDIO RECORDING Ⓗ	HEATER [+]	HEATER (+)
E. REC 5V	EXCEPT RECORDING 5V	HEATER [−]	HEATER (−)
EC	ERROR TORQUE CONTROL	HSS	HORIZONTAL SYNC SIGNAL
ECR	ERROR TORQUE CONTROL	HTR [+]	HEATER (+)
	REFERENCE VOLTAGE	HTR [−]	HEATER (−)
EDT TRIG [L]	EDIT TRIGGER Ⓛ	I RFE	REFERENCE CURRENT
EDIT [H]	EDIT Ⓗ	ICL	CONTROL AGC CIRCUIT
EE [H]	EE Ⓗ	IF	INTERMEDIATE FREQUENCY
EE [H]/INS [M]	EE Ⓗ/INSERT Ⓜ	IN SELA1	INPUT SELECT A1 POSITION
EE. VV. TR	EE/VV/TRICK PLAY	IN SELA2	INPUT SELECT A2 POSITION
EJECT. PO	EJECT POSITION	IN SELA3	INPUT SELECT A3 POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK	INS L/R [L]	INSERT Lch/Rch Ⓛ
ENV. SEL	ENVELOPE SELECT	INS. [H]	INSERT Ⓗ
ENVE. OUT	ENVELOPE OUTPUT	INSEL A1	INPUT SELECT A1 POSITION
ENVE. SEL	ENVELOPE SELECT	INSEL A2	INPUT SELECT A2 POSITION
ENV SELECT	ENVELOPE SELECT	INSERT	INSERT
EP [H]	LP Ⓗ	INSERT [H]	INSERT Ⓗ
EP/LP [H]	LP Ⓗ	IO CS	INPUT/OUTPUT CHIP SELECT
EP/LP/SP	LP/SP	JOG1	JOG1
EP/SS [H]	LP/SLOW/STILL/STOP Ⓗ	JOG S3 LED/FOWRD	JOG LED/FORWARD LED
EPROMCS	EPROM CHIP SELECT	JOG/F. LED	JOG LED/FORWARD LED
EX. REC 5V	EXCEPT RECORDING 5V	JSB [H]	JSB Ⓗ
FF/REW [L]	FIRST FORWARD/REWIND Ⓛ	JST. CLCK	JUST CLOCK
FG1 IN	FG1 PULSE INPUT	JST. CLK	JUST CLOCK
FG2 IN	FG2 PULSE INPUT	JST. CLOCK	JUST CLOCK
FILTER ADJUSTMEN	FILTER ADJUSTMENT	L. OUT	Lch OUTPUT
FLY ERASE [H]	FLYING ERASE HEAD ON Ⓗ	L. CH [H]	Lch Ⓗ
FLY ON [H]	FLYING ERASE E HEAD ON Ⓗ	L. CH [L]	Lch Ⓛ
FLY. E [H]	FLYING ERASE HEAD ON Ⓗ	LED (MAIN)	LED (MAIN)
FM MUT [H]	FM AUDIO MUTE Ⓗ	LED (STEREO)	LED (STEREO)
FM MUTE [H]	FM AUDIO MUTE Ⓗ	LED (SUB)	LED (SUB)
FM OUT [L]	FM OUTPUT (L)	LED CKL	LED SERIAL CLOCK
FM OUT [R]	FM OUTPUT (R)	LED CKS	LED SERIAL CLOCK
FM PACK OUT [L]	FM PACK OUTPUT (L)	LED DATA	LED SERIAL DATA
FM PACK OUT [R]	FM PACK OUTPUT (R)	LINE IN 1 [L]	LINE INPUT 1 (L)
FM/BS SEL [L]	FM/BS SELECT (L)	LINE IN 1 [R]	LINE INPUT 1 (R)
FM/BS SEL [R]	FM/BS SELECT (R)	LINE IN 2 [L]	LINE INPUT 2 (L)
FS. CLK	FS CLOCK	LINE IN 2 [R]	LINE INPUT 2 (R)
FUL. E [H]	FULL ERASE HEAD ON Ⓗ	LINE IN V	LINE INPUT VIDEO
FULL. E [H]	FULL ERASE HEAD ON Ⓗ	LINE IN [L]	LINE INPUT (L)
FULL. E. 12V	FULL ERASE 12V	LINE IN [R]	LINE INPUT (R)
GND [A]	GND (ANALOGUE)	LINE OUT [L]	LINE OUTPUT (L)
GND [TU]	GND (TUNER)	LINE OUT [R]	LINE OUTPUT (R)
GND/N. SW. 12V	GND/NON SW 12V	LP [H]	LP Ⓗ

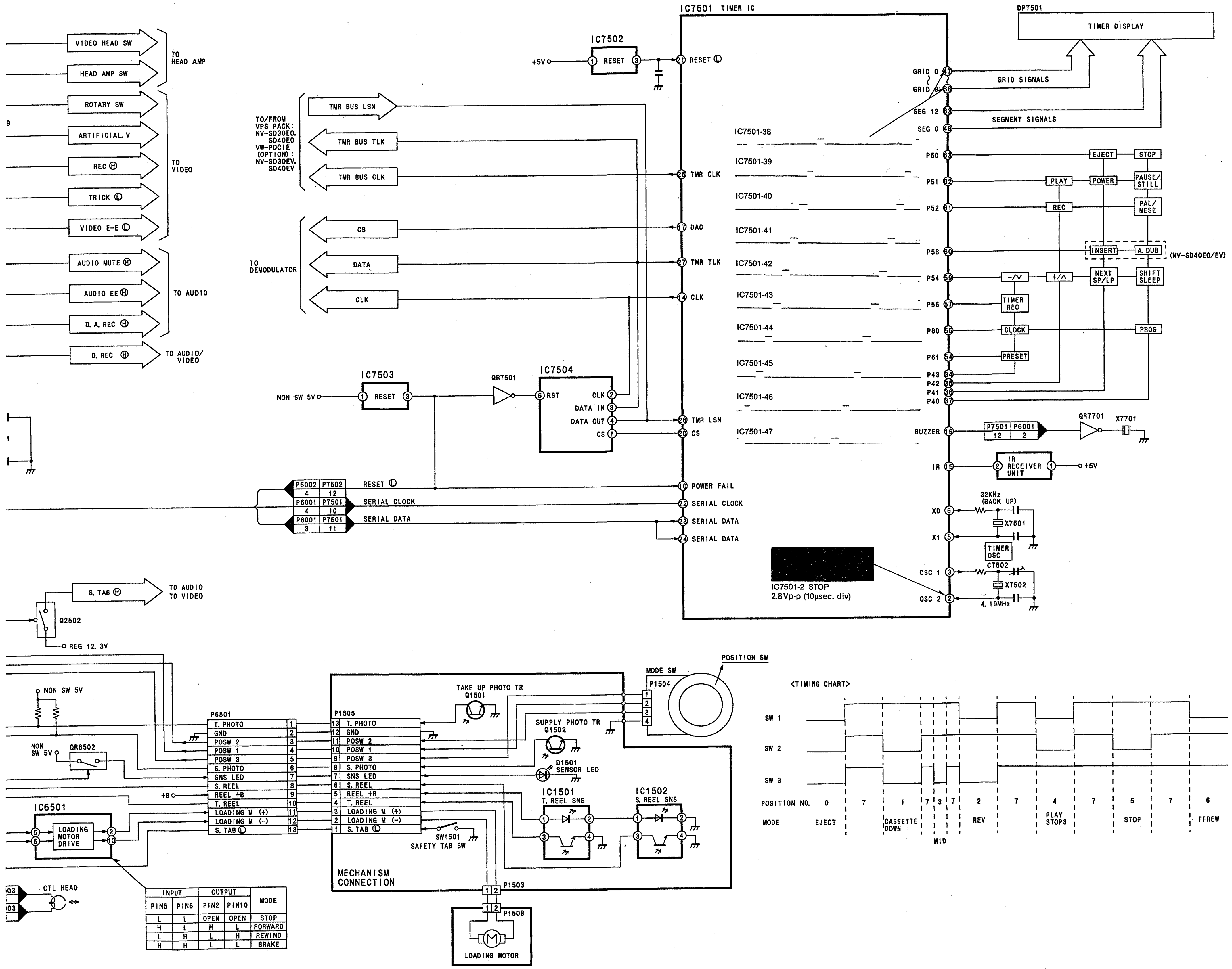
LPTRI [L]	LP TRICK PLAY Ⓛ
Lch/A. DUB	Lch/AUDIO DUBBING
M GND	MOTOR GND
M REG	MOTOR REGULATOR
MAIN OUT	MAIN OUTPUT
MAIN [L]	MAIN Ⓛ
MAIN/MONO	MAIN/MONAURAL
MAX IN	MAXIMAM INPUT
MES [H]	MESECAM Ⓗ
MESE [H]	MESECAM Ⓗ
MESE [L]	MESECAM Ⓛ
METER 5V	LEVEL METER 5V
METER [L]	LEVEL METER (L)
METER [R]	LEVEL METER (R)
METER. L/AVS	LEVEL METER (L)
METER. R/AVC	LEVEL METER (R)
MI/BI [L]	MIX Ⓗ/BILIGUAL
MIC GND	MIC GND
MIC IN	MIC INPUT
MIC IN [L]	MIC INPUT (L)
MIC IN [R]	MIC INPUT (R)
MIC [H]	MIC Ⓗ
MIX [H]	MIX Ⓗ
MIX [H]/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINE	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MN. H/M. L	MONAURAL Ⓗ/MAIN Ⓛ
MN. H/MAI. L	MONAURAL Ⓗ/MAIN Ⓛ
MN2/MES. L	MONAURAL 2/MESECAM Ⓛ
MODE SEL	AUDIO MODE SELECT
MODE SW	AUDIO MODE SW
MODE. S. IN	AUDIO MODE SELECT INPUT
MODE. S. OUT	AUDIO MODE SELECT OUTPUT
MONO [H]	MONAURAL Ⓗ
MONO [H]/MAIN [L]	MONAURAL Ⓗ/MAIN Ⓛ
MONO2 [L]	MONAURAL 2
MONO2/MESE [FM(L)]	MONAURAL 2/MESECAM (FM Ⓛ)
MOTOR GND	MOTOR GND
MUTE	MUTE
N. A. REC [L]	NORMAL AUDIO RECORDING
N. SW 12V	NON SW 12V
N. SW. 5. DET	NON SW 5V DETECT
NICAM	NICAM
NICAM [L]	NICAM Ⓛ
NOL [H]	PAL Ⓗ/4.43 NTSC Ⓜ/3.58 NTSC Ⓛ
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY Ⓗ
NORMAL [H]	NORMAL Ⓗ
NR BIAS	NR BIAS
NTSC [L]	NTSC Ⓛ
OCH	CONTROL AGC CIRCUIT
OUT	OUTPUT
P-OFF [H]	POWER OFF Ⓗ
P-OFF [L]	POWER OFF Ⓛ
P. FAIL	POWER FAILURE DETECT
P. OFF [H]	POWER OFF Ⓗ
P. OFF [L]	POWER OFF Ⓛ
PAL [H]	PAL Ⓗ
PAL [L]/NTSC [H]	PAL Ⓛ/NTSC Ⓗ
PB ADJ OUT	PLAYBACK ADJUST OUTPUT
PB OUT	PLAYBACK OUTPUT
PB. H	PLAYBACK Ⓗ
PFG	PG/FG
PHOTSN +B	PHOTO SENSOR +B
PICT. CNT	PICTURE CONTROL
PLAY LED/RVS LED	PLAY LED/REVERSE LED
PLAY. PO	PLAY POSITION
PLAY/R. LED	PLAY LED/REVERSE LED
PLY/DEW	PLAY/DEW Ⓗ
POWER OFF [L]	POWER OFF Ⓛ
PREROLL [H]	PREROLL Ⓗ
PWRFAIL	POWER FAILURE DETECT
R. CH [H]	Rch Ⓗ
R. CH [L]	Rch Ⓛ
R. ST	RESET
R/S/F	REVERSE Ⓗ/STOP Ⓜ/FORWARD Ⓛ
RCH [H]	Rch Ⓗ
REC 12V	RECORDING 12V
REC CHROMA	RECORDING CHROMINANCE SIGNAL
REC H	RECORDING Ⓗ
REC IN	RECORDING INPUT
REC OUT [L]	RECORDING OUTPUT Ⓛ
REC START	RECORDING START
REC VR [C]	RECORDING VOLUME (COMMON)
REC VR [L]	RECORDING VOLUME (L)
REC VR [R]	RECORDING VOLUME (R)
REC Y	RECORDING LUMINANCE SIGNAL
REC [H]	RECORDING Ⓗ
REC. C	RECORDING CHROMINANCE SIGNAL
REC. Y	RECORDING LUMINANCE SIGNAL
REC/EE CTL	RECORDING/EE CONTROL
REEL-T	REEL PULSE (TAKE-UP)
REEL-S	REEL PULSE (SUPPLY)
REGULATOR FILTER	REGULATOR FILTER
RESET	RESET
REV M F/R	REVIEW MOTOR FORWARD/REVERSE
REV M V1	REVIEW MOTOR V1
REV M V2	REVIEW MOTOR V2
REV MOTOR F/R	REVIEW MOTOR FORWARD/REVERSE
REV MOTOR V1	REVIEW MOROR V1
REV MOTOR V2	REVIEW MOTOR V2
REV MOTOR [+]	REVIEW MOTOR (+)
REV MOTOR [−]	REVIEW MOTOR (−)
REV. M. GND	REVIEW MOTOR GND
RF. CHROMA	RF CHROMINANCE SIGNAL
RF OUT	RF OUTPUT
RF Y	RF LUMINANCE SIGNAL
RF. Y. IN	RF LUMINANCE SIGNAL INPUT
RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT

ROTAR. SW	ROTARY SW
ROTARY	ROTARY SW
RST	RESET
RST [L]	RESET Ⓛ
Rch/INST	Rch/INSERT
S IN	SERIAL DATA INPUT
S OUT	SERIAL DATA OUTPUT
S-PHOTO	SUPPLY PHOTO TRANSISTOR
S-RL. PLS	SUPPLY REEL PULSE
S. CLK	SERIAL CLOCK
S. CLK/AV	SERIAL CLOCK/AV
S. DATA	SERIAL DATA
S. DATA/A	SERIAL DATA
S. PHOTO	SUPPLY PHOTO TRANSISTOR
S. TAB [L]	SAFETY TAB SW ON Ⓛ
S/P/N	SECAM/PAL/NTSC
SC IN	SERIAL CLOCK INPUT
SC OUT	SERIAL CLOCK OUTPUT
SCK SELECT	SERIAL CLOCK SELECT
SEL OUT [L]	SELECT OUTPUT (L)
SEL OUT [R]	SELECT OUTPUT (R)
SHUTTLE 1	SHUTTLE 1
SIF	SOUND INTERMEDIATE FREQUENCY
SLMUT [H]	INPUT SELECT MUTE Ⓗ
SLNID [+]	SOLENOID (+)
SLNID [−]	SOLENOID (−)
SLW TR. MM	SLOW TRACKING MONO MULTI
SLW TR. REF	SLOW TRACKING REFERENCE VOLTAGE
SNS. GND	SENSOR GND
SOFT [H]	SOFT TAPE PLAY Ⓗ
SOFT [H]/NORMAL	SOFT TAPE PLAY Ⓗ/NORMAL Ⓗ
SOLENOID ON [L]	SOLENOID ON Ⓛ
SP [H]	SP Ⓗ
SP/L/SLP	SP/LP
SSS [L]	SLOW/STILL/STOP
STEREO LED	STEREO LED
STEREO [H]	STEREO Ⓗ
STEREO [L]	STEREO Ⓛ
STOP. PO	STOP POSITION
STOP/5V	STOP POSITION/5V
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT
STOP1/PAL:ST	STOP1 POSITION/PAL
STOP2. PO	STOP 2 POSITION
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW
STREO [H]	STEREO Ⓗ
SUB BIAS	SUB BIAS
SUB. SW	SUB SW
SVHS CAS [L]	S-VHS CASSETTE Ⓛ
SW. 5. DET	SW 5V DETECT
SYNC [L]	SYNC Ⓛ
SYSCON 5V	SYSTEM CONTROL 5V
SYSTEM	SYSTEM SW
T-PHOTO	TAKE-UP PHOTO TRANSISTOR
T-RL. PLS	TAKE-UP REEL PULSE
T. BUSCLK	TIMER BUS CLOCK
T. BUSLSN	TIMER BUS LISTEN
T. BUSTLK	TIMER BUS TALK
T. END [L]	TAPE END Ⓛ
T. PHOTO	TAKE-UP PHOTO TRANSISTOR
TAPE END [L]	TAPE END Ⓛ
TAPE END [L]/CAM	TAPE END Ⓛ/CAMERA PAUSE
TEST	TEST MODE
TPZ	TRAPEZOIDAL WAVE CIRCUIT
TRIC [L]	TRIC PLAY Ⓛ
TRICK [L]	TRIC PLAY Ⓛ
TRK. ENV	AUTO TRACKING ENVELOPE DETECT
TU. AUDIO	TUNER AUDIO
TU. GND	TUNER GND
TU. V. IN	TUNER VIDEO SIGNAL INPUT
TU. VIDEO	TUNER VIDEO
TUN NOR IN	TUNER NORMAL INPUT
TUN R	TUNER AUDIO (R)
TUN. AUDIO IN	TUNER AUDIO INPUT
TUNER 12V	TUNER 12V
TUNER L	TUNER AUDIO (L)
TUNER V IN	TUNER VIDEO SIGNAL INPUT
TUNER [L]	TUNER AUDIO (L)
TUNER [N]	TUNER AUDIO (NORMAL)
TUNER [R]	TUNER AUDIO (R)
TUNER. 12	TUNER 12V
TUOFF [H]	TUNER OFF Ⓗ
TV. AUDIO	TV AUDIO
TV/VTR	TV/VTR
TXTON [L]	TEXT ON Ⓛ
U. REG45V	UNREGULATOR 45V
UNREG	UNREGULATOR
UNREG19V	UNREGULATOR 19V
V. REF	REFERENCE VOLTAGE
V. EE [H]	VIDEO EE Ⓗ
V. EE [L]	VIDEO EE Ⓛ
VCO REF	RERERENCE OSCILLATER
VD. IN	VIDEO SIGNAL INPUT
VD. OUT	VIDEO SIGNAL OUTPUT
VIDEO EE [L]	VIDEO EE Ⓛ
VIDEO IN	VIDEO SIGNAL INPUT
VIDEO OUT	VIDEO SIGNAL OUTPUT
VM	MOTOR VOLTAGE
VM DOWN [L]	MOTOR VOLTAGE DOWN Ⓛ
VSS	VERTICAL SYNC SIGNAL
VTR [H]	VTR Ⓗ
VTR. 12V	VTR 12V
X IN	OSCILLATOR INPUT
X OUT	OSCILLATOR OUTPUT

3-2. SYSTEM CONTROL & SERVO BLOCK DIAGRAM


DD CAPSTAN MOTOR
CAPSTAN FG HEAD
MAIN COIL 2
MAIN COIL 1
HALL IC
H3
H2
H1
MAIN COIL 3
GND (FG)
M2
FG2
M1
VH+
H3-
FG1
H3+
H2-
VH-
H2+
H1-
12V
H1+
M3
IC2502-1, 3, 23 REC/PLAY
2.2Vp-p (50msec. div)
P2501
IC2502 CAPSTAN MOTOR DRIVE IC
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
TORQUE CONTROL
TORQUE DIRECTION
POSITION SIGNAL PROCESS
N. SW 5V
REFERENCE
TP2026
UNLEG 14V
TO POWER
POWER OFF Ⓛ
QR1001
REFERENCE
TP2015
IC2503
CAPSTAN FG AMP
TP GND2
TPSERV
SERVICE
TEST
(NV-SD40EO/EV)
FROM HEAD AMP
P3001
IC6001 SYSTEM CONTROL/SERVO IC
NORMAL Ⓗ
SERVICE Ⓜ
TEST Ⓛ
(AUTO TRACKING OFF)
ENVE. SELECT
CAP ERROR
CAP REVERSE Ⓗ
STOP Ⓜ
FORWARD Ⓛ
POWER OFF Ⓗ
FG2
FG1
IC6001-60 REC
4.8Vp-p (10msec. div)
VIDEO HEAD SW
HEAD AMP SW
ROTARY SW
ARTIFICIAL. V
REC Ⓗ
TRICK PLAY Ⓛ
VIDEO E-E Ⓛ
A. MUTE Ⓗ
A. EE Ⓗ
D. A. REC Ⓗ
D. REC Ⓗ
TP2009
VIDEO HEAD SW
HEAD AMP SW
TO HEAD AMP
ROTARY SW
ARTIFICIAL. V
REC Ⓗ
TRICK Ⓛ
VIDEO E-E Ⓛ
TO VIDEO
AUDIO MUTE Ⓗ
AUDIO EE Ⓗ
D. A. REC Ⓗ
TO AUDIO
D. REC Ⓗ
TO AUDIO/ VIDEO
NON SW 5V
Q2003
Q2004
LP Ⓗ /SP Ⓛ
TO LUMI & CHROMA
LP Ⓗ
N SW 5V
IC6001-10 REC
5.0Vp-p (10msec. div)
IC6001-27, 28 REC
0.6Vp-p (10msec. div)
IC6001-41 PLAY
2.0Vp-p (5msec. div)
QR2001
(LP Ⓛ:ON)
LP Ⓛ
X6001
TO HEAD AMP
LP Ⓗ
N SW 5V
(NV-SD40EO/EV)
Q2001
(PAL Ⓗ: ON)
TO AUDIO
LP Ⓗ
NTSC Ⓛ
RESET Ⓛ
SERIAL CLK
SERIAL DATA
TP2002
PB. CTL
CTL (-) CLUMP
CTL (+) CLUMP
IC6001-63,64 REC
5.0Vp-p (5msec. div)
N SW 5V
(NV-SD30EO/EV)
QR2006
(SP Ⓛ :ON)
(NV-SD40EO/EV)
QR2002
FF. REW Ⓛ
REC SELECT
SERIAL CLK SELECT
QR6005
S. TAB Ⓗ
TO AUDIO
TO VIDEO
Q2502
REG 12. 3V
N SW 5V
Q2002
TO AUDIO/ LUMI & CHROMA
NTSC Ⓛ
(NV-SD40EO/EV)
N SW 5V
QR2013
(NTSC Ⓛ:ON)
QR2010
(REV Ⓗ :ON)
VR2018
LP REV
QR2009
(FWD Ⓛ :ON)
VR2006
LP FWD
QR2008
(REV Ⓗ :ON)
VR2019
SP REV
QR2007
(CUE Ⓛ :ON)
VR2011
SP FWD
REV Ⓗ
SLOW TR. MM
IC6001-5 REC
5.0Vp-p (2msec. div)
POSITION SW 1
POSITION SW 2
POSITION SW 3
NON SW 5V
VR2001
PG SHIFTER
(NV-SD40EO/EV)
CYL PG MM
IC2501-1, 2, 17 REC
12Vp-p (2msec. div)
IC6001-19 REC
7.0Vp-p (0.2msec. div)
TAKE UP PHOTO
SUPPLY PHOTO
P6501
T. PHOTO
GND
POSW 2
POSW 1
POSW 3
S. PHOTO
SNS LED
S. REEL
REEL +B
T. REEL
LOADING
LOADING
S. TAB Ⓛ
NON SW 5V
QR6502
DD CYLINDER MOTOR
MAIN COIL 3
MAIN COIL 2
MAIN COIL 1
HALL IC
M2
VH+
HE+
M3
GND
VM
HE-
M1
IC2501 CYLINDER DRIVE IC
MOTOR DRIVE
PG/FG
DIFFERENTIAL AMPLIFIER
TORQUE CONTROL
SCHMIT
CYL PFG
CYL ET.
TAPE SENSOR LED
S. REEL PULSE
T. REEL PULSE
+B
IC6501
LOADING MOTOR DRIVE
IC6001-34,35 REC
2.5Vp-p (10msec. div)
LOADING Ⓗ
UN LOADING Ⓗ
S. TAB Ⓛ
FROM HEAD AMP
TRACKING ENV.
AUTO TRACKING ENV.
IC6001-43 REC
5.0Vp-p (10msec. div)
FROM LUMINANCE & CHROMINANCE
VSS
VSS
5V (D)
5V (DAC)
5V (A)
IC6001-26 REC
2.1Vp-p (5msec. div)
CTL HEAD (-)
CTL HEAD (+)
P4003
CTL HEAD
N SW 5V
22K
22K
IC6502
SLOW TRACKING REF (REG 2.5V)

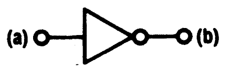
INPUT		OUTPUT	
PIN5	PIN6	PIN2	PIN10
L	L	OPEN	OPEN
H	L	H	L
L	H	L	H
H	H	L	L


VIDEO HEAD SW
HEAD AMP SW
TO HEAD AMP
ROTARY SW
ARTIFICIAL. V
REC Ⓗ
TRICK Ⓛ
VIDEO E-E Ⓛ
TO VIDEO
AUDIO MUTE Ⓗ
AUDIO EE Ⓗ
D. A. REC Ⓗ
TO AUDIO
D. REC Ⓗ
TO AUDIO/VIDEO
IC7501 TIMER IC
IC7502
+5V
RESET
RESET Ⓛ
TO/FROM VPS PACK: NV-SD30EO, SD40EO VW-PDC1E (OPTION): NV-SD30EV, SD40EV
TMR BUS LSN
TMR BUS TLK
TMR BUS CLK
TMR CLK
TO DEMODULATOR
CS
DATA
CLK
DAC
TMR TLK
CLK
IC7503
NON SW 5V
RESET
QR7501
IC7504
RST
CLK
DATA IN
DATA OUT
CS
TMR LSN
CS
P6002 P7502 4 12
RESET Ⓛ
P6001 P7501 4 10
SERIAL CLOCK
P6001 P7501 3 11
SERIAL DATA
POWER FAIL
SERIAL CLOCK
SERIAL DATA
SERIAL DATA
IC7501-38
IC7501-39
IC7501-40
IC7501-41
IC7501-42
IC7501-43
IC7501-44
IC7501-45
IC7501-46
IC7501-47
GRID 0
GRID 9
SEG 12
SEG 0
P50
P51
P52
P53
P54
P56
P60
P61
P43
P42
P41
P40
BUZZER
IR
X0
X1
OSC 1
OSC 2
DP7501
TIMER DISPLAY
GRID SIGNALS
SEGMENT SIGNALS
EJECT
STOP
PLAY
POWER
PAUSE/STILL
REC
PAL/MESE
INSERT
A. DUB
(NV-SD40EO/EV)
-/V
+/Λ
NEXT SP/LP
SHIFT SLEEP
TIMER REC
CLOCK
PROG
PRESET
P7501 P6001 12 2
QR7701
X7701
IR RECEIVER UNIT
+5V
32KHz (BACK UP)
X7501
TIMER OSC
C7502
X7502
4.19MHz
IC7501-2 STOP
2.8Vp-p (10μsec. div)
S. TAB Ⓗ
TO AUDIO
TO VIDEO
Q2502
REG 12.3V
NON SW 5V
NON SW 5V
QR6502
IC6501
LOADING MOTOR DRIVE
CTL HEAD
P6501
T. PHOTO
GND
POSW 2
POSW 1
POSW 3
S. PHOTO
SNS LED
S. REEL
REEL +B
T. REEL
LOADING M (+)
LOADING M (-)
S. TAB Ⓛ
+B
P1505
TAKE UP PHOTO TR Q1501
SUPPLY PHOTO TR Q1502
D1501 SENSOR LED
IC1501 T. REEL SNS
IC1502 S. REEL SNS
SW1501 SAFETY TAB SW
MECHANISM CONNECTION
P1503
P1508
LOADING MOTOR
MODE SW
P1504
POSITION SW
<TIMING CHART>
SW 1
SW 2
SW 3
POSITION NO.
0
7
1
7
3
7
2
7
4
7
5
7
6
MODE
EJECT
CASSETTE DOWN
MID
REV
PLAY STOP3
STOP
FFREW

INPUT		OUTPUT		MODE
PIN5	PIN6	PIN2	PIN10	
L	L	OPEN	OPEN	STOP
H	L	H	L	FORWARD
L	H	L	H	REWIND
H	H	L	L	BRAKE

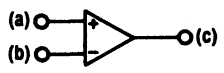
SYMBOL	TRUTH VALUE TABLE

INVERTER



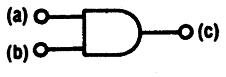
IN	(a)	H	L
OUT	(b)	L	H

COMPARTOR



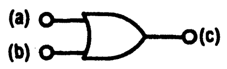
IN	(a) (b)	(a)>(b)	(a)<(b)
OUT	(c)	H	L

AND CIRCUIT



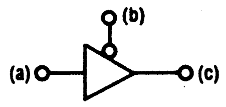
IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	L	L	H

OR CIRCUIT



IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	H	H	H

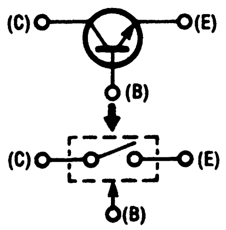
THREE STATES BUFFER



IN	(a)	H	L	H or L
	(b)	L	L	H
OUT	(c)	H	L	※

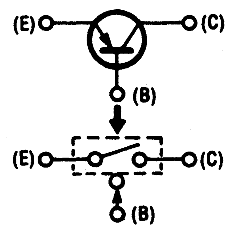
※ High Impedance

TR. SW (NPN TYPE)



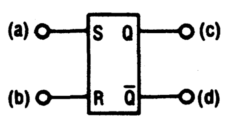
BASE	H	L
TR. SW	ON	OFF

TR. SW (PNP TYPE)



BASE	H	L
TR. SW	OFF	ON

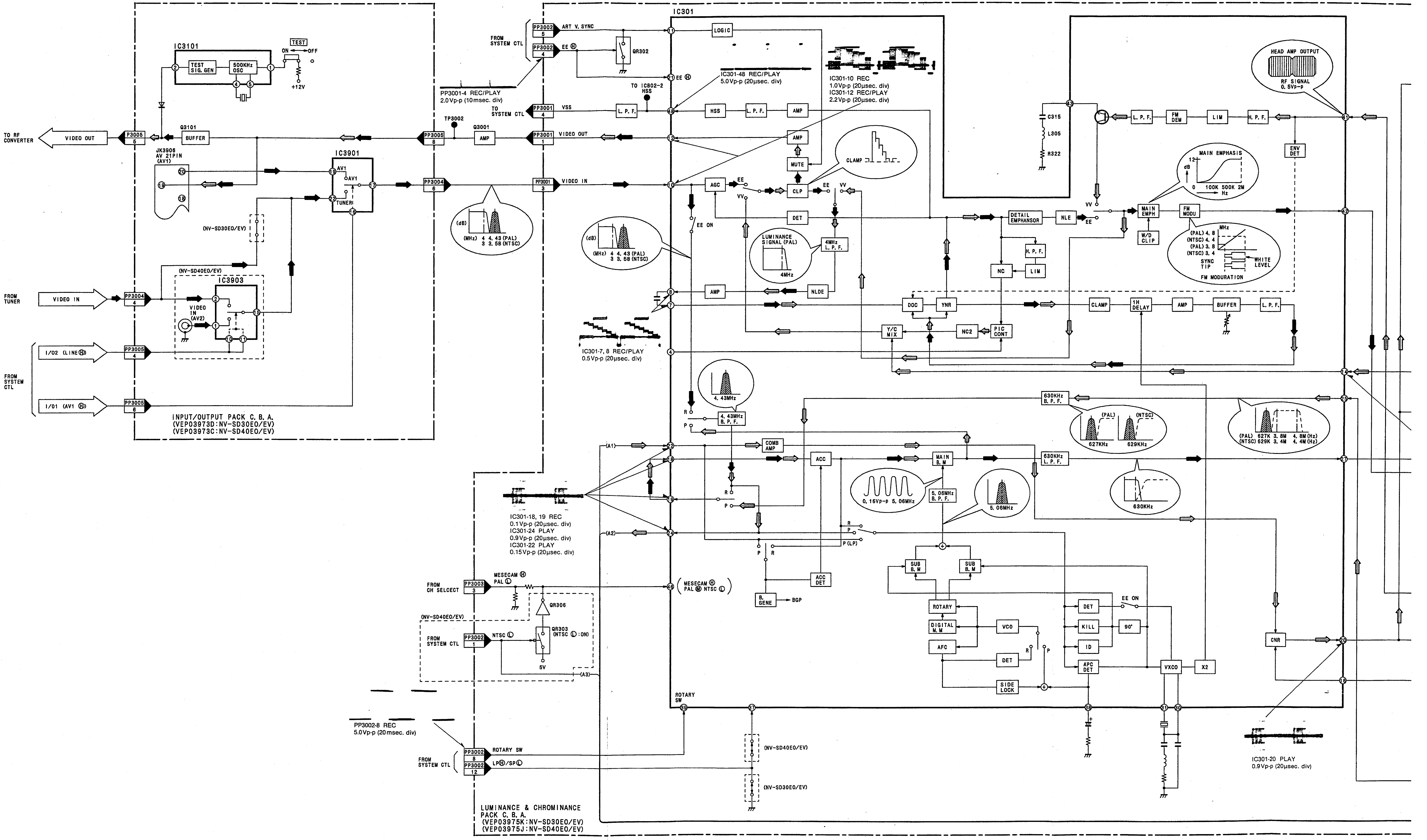
R-S TYPE FLIP-FLOP

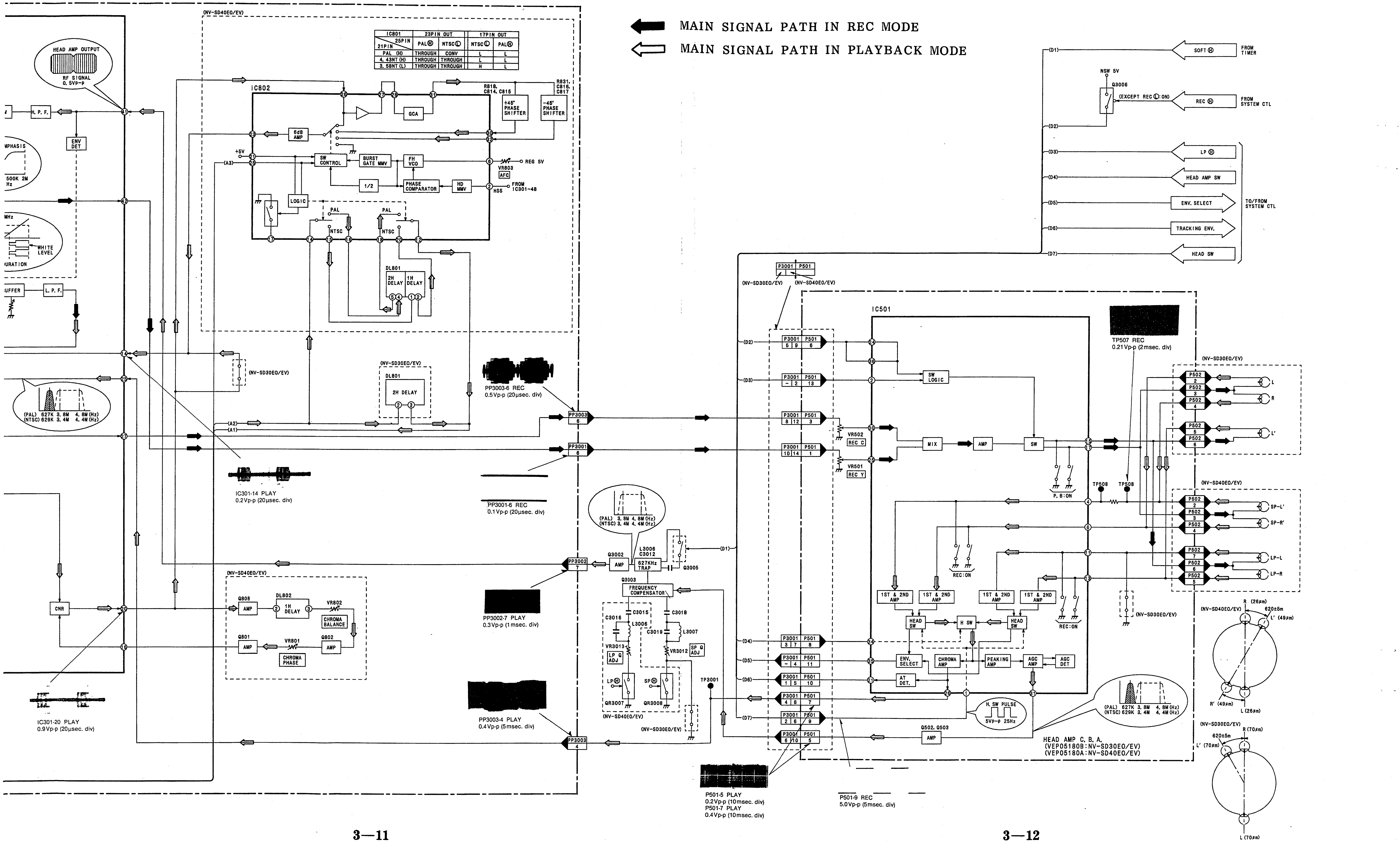


IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	◆	H	L

※ Initial condition is maintained.
◆ Initial condition is reversed.

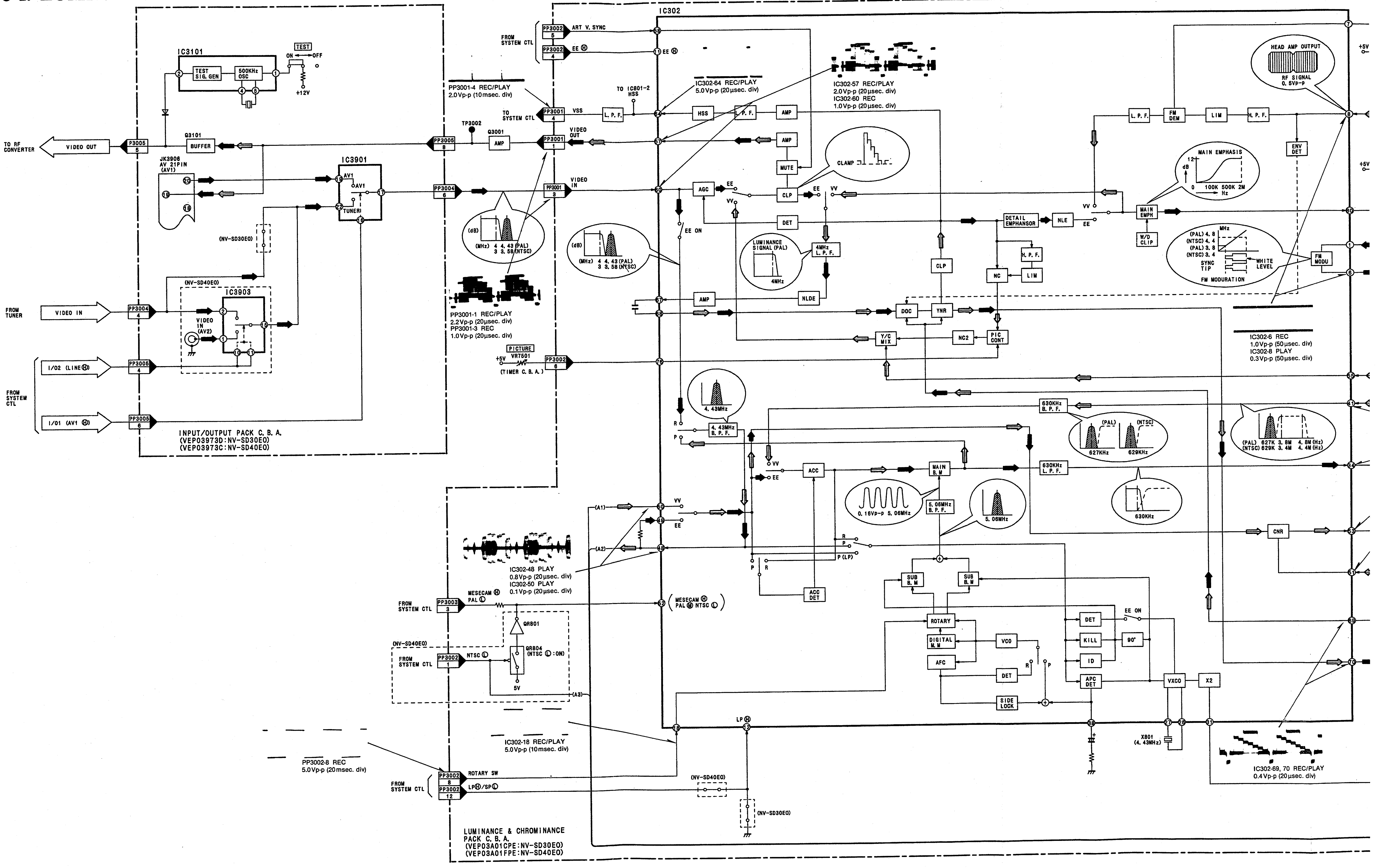
3-3. LUMINANCE & CHROMINANCE BLOCK DIAGRAM (NV-SD30EO/EV, SD40EO/EV) FOR "MADE IN JAPAN"

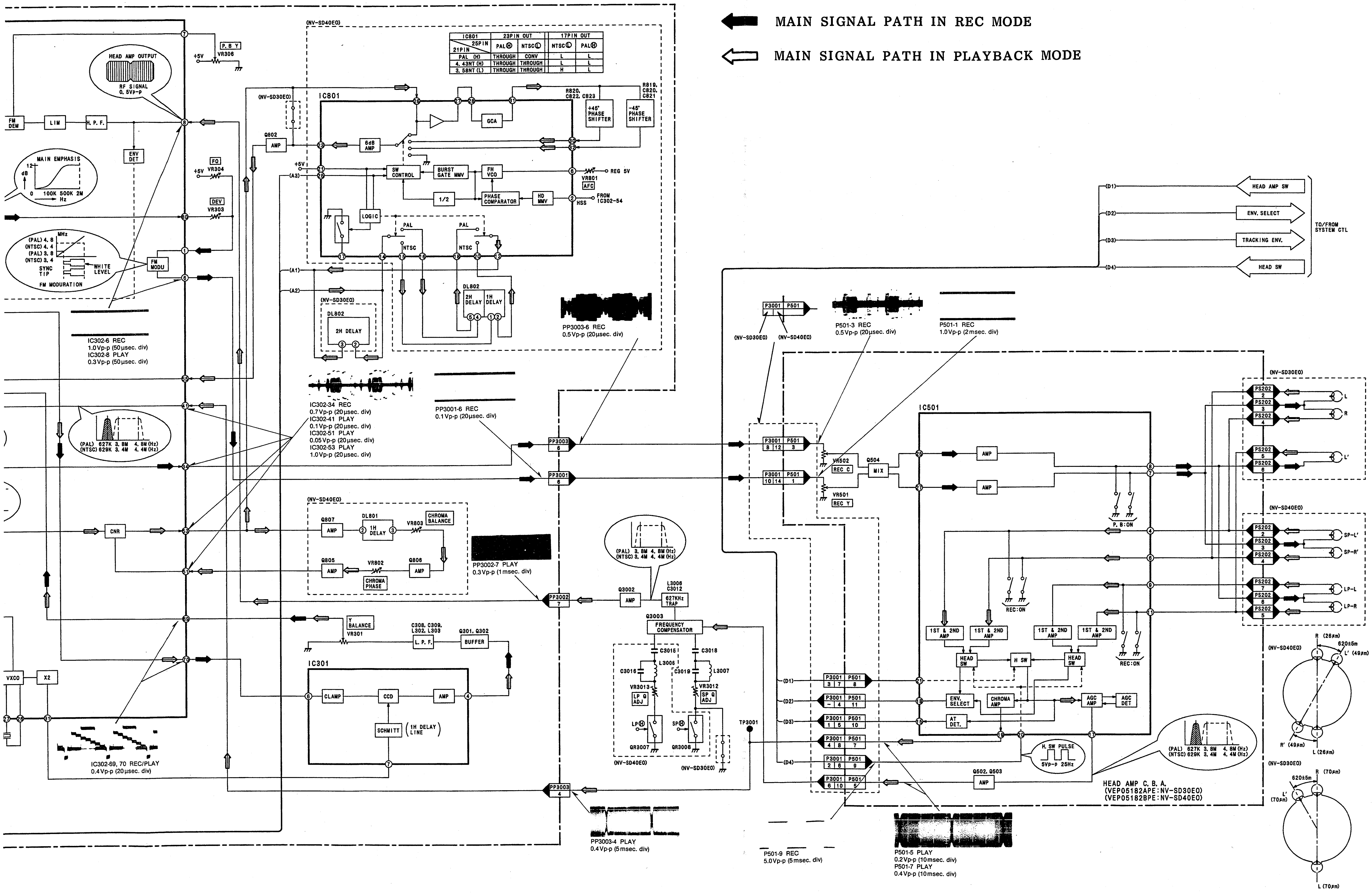

IC3101
TEST SIG. GEN
500KHz OSC
TEST
ON
OFF
+12V
TO RF CONVERTER
VIDEO OUT
PP3005 5
Q3101
BUFFER
JK3906 AV 21PIN (AV1)
IC3901
AV1
TUNER
PP3005 8
PP3004 6
TP3002
Q3001
AMP
(NV-SD30EO/EV)
(NV-SD40EO/EV)
IC3903
VIDEO IN (AV2)
FROM TUNER
VIDEO IN
PP3004 4
FROM SYSTEM CTL
I/02 (LINE H)
PP3005 4
I/01 (AV1 H)
PP3005 6
INPUT/OUTPUT PACK C. B. A.
(VEP03973D: NV-SD30EO/EV)
(VEP03973C: NV-SD40EO/EV)
(dB)
(MHz) 4 4.43 (PAL) 3 3.58 (NTSC)
FROM SYSTEM CTL
PP3002 5
ART V. SYNC
PP3002 4
EE H
QR302
PP3001-4 REC/PLAY 2.0Vp-p (10msec. div)
TO SYSTEM CTL
PP3001 4
VSS
TO IC802-2 HSS
PP3001 1
VIDEO OUT
PP3001 3
VIDEO IN
IC301
LOGIC
IC301-48 REC/PLAY 5.0Vp-p (20μsec. div)
IC301-10 REC 1.0Vp-p (20μsec. div)
IC301-12 REC/PLAY 2.2Vp-p (20μsec. div)
L. P. F.
HSS
AMP
MUTE
CLAMP
AGC
EE
VV
CLP
DET
EE ON
LUMINANCE SIGNAL (PAL)
4MHz
4MHz L. P. F.
NLDE
DOC
YNR
Y/C MIX
NC2
PIC CONT
NC
LIM
H. P. F.
DETAIL EMPHANSOR
NLE
IC301-7, 8 REC/PLAY 0.5Vp-p (20μsec. div)
C315
L305
R322
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
FM DEM
ENV DET
MAIN EMPHASIS
dB
12
0 100K 500K 2M Hz
MAIN EMPH
FM MODU
W/D CLIP
MHz
(PAL) 4.8
(NTSC) 4.4
(PAL) 3.8
(NTSC) 3.4
SYNC TIP
WHITE LEVEL
FM MODURATION
CLAMP
1H DELAY
BUFFER
4.43MHz
4.43MHz B. P. F.
R
P
630KHz B. P. F.
(PAL)
(NTSC)
627KHz
629KHz
(PAL) 627K 3.8M 4.8M (Hz)
(NTSC) 629K 3.4M 4.4M (Hz)
(A1)
COMB AMP
ACC
MAIN B. M
630KHz L. P. F.
0.16Vp-p 5.06MHz
5.06MHz B. P. F.
5.06MHz
630KHz
IC301-18, 19 REC 0.1Vp-p (20μsec. div)
IC301-24 PLAY 0.9Vp-p (20μsec. div)
IC301-22 PLAY 0.15Vp-p (20μsec. div)
(A2)
P (LP)
SUB B. M
ACC DET
B. GENE
BGP
FROM CH SELECT
PP3003 3
MESECAM H PAL L
MESECAM H PAL H NTSC L
QR306
(NV-SD40EO/EV)
FROM SYSTEM CTL
PP3002 1
NTSC L
QR303 (NTSC L: ON)
5V
(A3)
ROTARY
DIGITAL M. M
AFC
VCO
DET
SIDE LOCK
KILL
ID
APC DET
90°
EE ON
VXCO
X2
CNR
ROTARY SW
PP3002-8 REC 5.0Vp-p (20msec. div)
PP3002 8
ROTARY SW
PP3002 12
LP H / SP L
(NV-SD40EO/EV)
(NV-SD30EO/EV)
LUMINANCE & CHROMINANCE PACK C. B. A.
(VEP03975K: NV-SD30EO/EV)
(VEP03975J: NV-SD40EO/EV)
IC301-20 PLAY 0.9Vp-p (20μsec. div)


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
H. P. F.
ENV DET
500K 2M Hz
WHITE LEVEL
BUFFER
L. P. F.
(PAL) 627K 3.8M 4.8M (Hz)
(NTSC) 629K 3.4M 4.4M (Hz)
CNR
(NV-SD40EO/EV)
IC802
6dB AMP
GCA
SW CONTROL
BURST GATE MMV
FH VCO
1/2
PHASE COMPARATOR
HD MMV
LOGIC
PAL
NTSC
+5V
(A3)
REG 5V
VR803 AFC
FROM IC301-48
HSS
R818, C814, C815
+45° PHASE SHIFTER
R831, C816, C817
-45° PHASE SHIFTER
DL801
2H DELAY
1H DELAY
(NV-SD30EO/EV)
DL801 2H DELAY
(A2)
(A1)
PP3003-6 REC 0.5Vp-p (20µsec. div)
IC301-14 PLAY 0.2Vp-p (20µsec. div)
PP3001-6 REC 0.1Vp-p (20µsec. div)
PP3002-7 PLAY 0.3Vp-p (1msec. div)
PP3003-4 PLAY 0.4Vp-p (5msec. div)
IC301-20 PLAY 0.9Vp-p (20µsec. div)
Q808 AMP
DL802 1H DELAY
VR802 CHROMA BALANCE
Q801 AMP
VR801 CHROMA PHASE
Q802 AMP
PP3003 6
PP3001 6
PP3002 7
PP3003 4
Q3002 AMP
L3006 C3012 627KHz TRAP
Q3005
Q3003 FREQUENCY COMPENSATOR
C3016 C3015 L3006 C3018 C3019 L3007
VR3013 LP Q ADJ
VR3012 SP Q ADJ
LP Ⓗ
SP Ⓗ
QR3007
QR3008
(NV-SD40EO/EV)
(NV-SD30EO/EV)
TP3001
(D1) SOFT Ⓗ FROM TIMER
NSW 5V
Q3006 (EXCEPT REC Ⓛ:ON)
(D2) REC Ⓗ FROM SYSTEM CTL
(D3) LP Ⓗ
(D4) HEAD AMP SW
(D5) ENV. SELECT
(D6) TRACKING ENV.
(D7) HEAD SW
TO/FROM SYSTEM CTL
P3001 P501
(NV-SD30EO/EV) (NV-SD40EO/EV)
IC501
SW LOGIC
MIX
AMP
SW
VR502 REC C
VR501 REC Y
P. B: ON
REC: ON
TP507 REC 0.21Vp-p (2msec. div)
TP508
1ST & 2ND AMP
HEAD SW
H SW
ENV. SELECT
CHROMA AMP
PEAKING AMP
AGC AMP
AGC DET
AT DET.
H. SW PULSE 5Vp-p 25Hz
Q502, Q503 AMP
P502
L R L' SP-L' SP-R' LP-L LP-R
R (26µm) L' (49µm) 620±5m R' (49µm) L (26µm)
R (70µm) L' (70µm) L (70µm)
P501-5 PLAY 0.2Vp-p (10msec. div)
P501-7 PLAY 0.4Vp-p (10msec. div)
P501-9 REC 5.0Vp-p (5msec. div)
HEAD AMP C. B. A.
(VEP05180B: NV-SD30EO/EV)
(VEP05180A: NV-SD40EO/EV)

IC801 21PIN \ 25PIN	23PIN OUT PAL Ⓗ	23PIN OUT NTSC Ⓛ	17PIN OUT NTSC Ⓛ	17PIN OUT PAL Ⓗ
PAL (H)	THROUGH	CONV	L	L
4.43NT (H)	THROUGH	THROUGH	L	L
3.58NT (L)	THROUGH	THROUGH	H	L

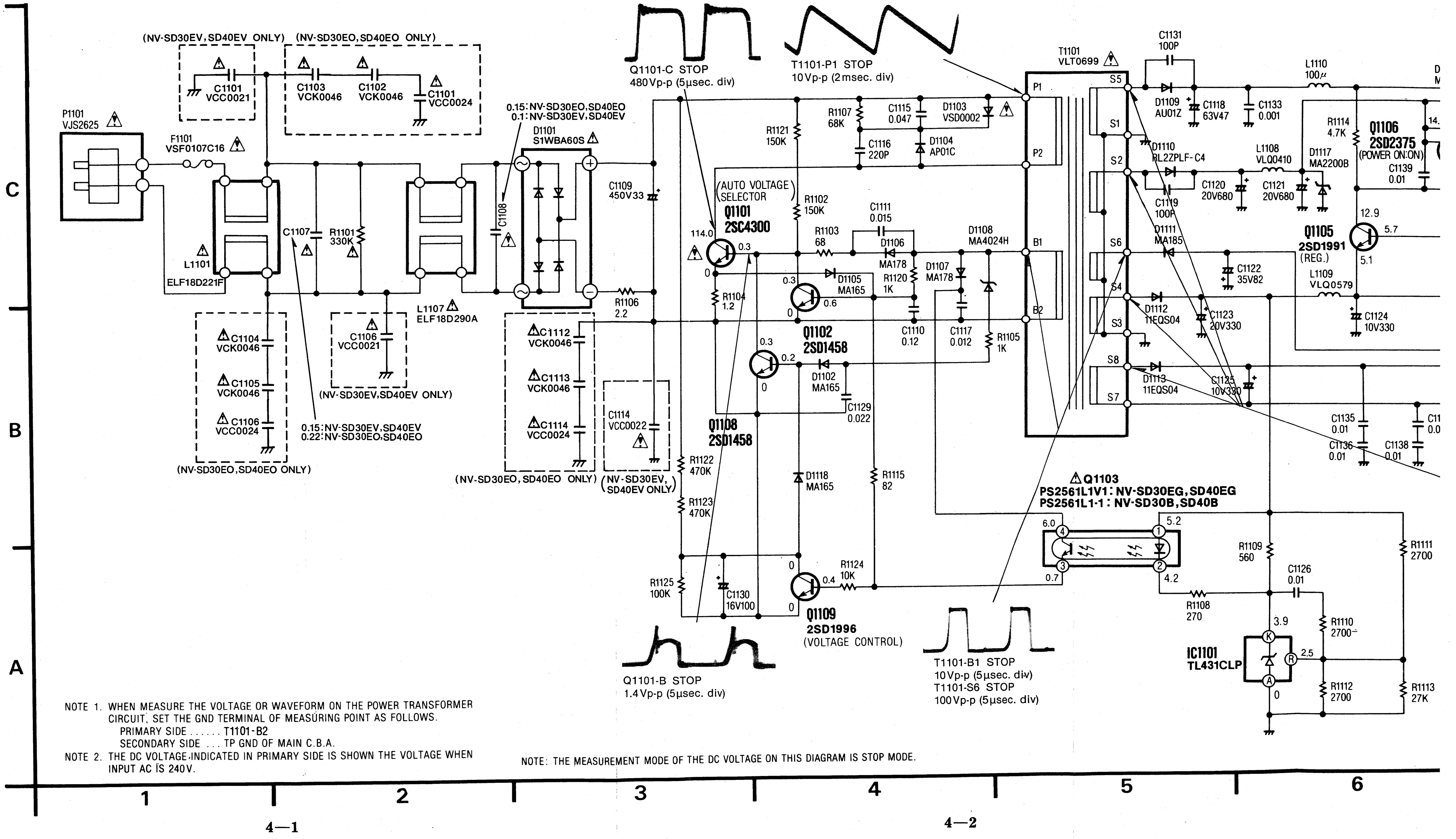
3-4. LUMINANCE & CHROMINANCE BLOCK DIAGRAM (NV-SD30EO, SD40EO) FOR “MADE IN GERMANY”


TO RF CONVERTER
VIDEO OUT
PP3005 5
Q3101
BUFFER
IC3101
TEST SIG. GEN
500KHz OSC
TEST
ON OFF
+12V
JK3906 AV 21PIN (AV1)
IC3901
AV1
TUNER
(NV-SD30EO)
(NV-SD40EO)
IC3903
VIDEO IN (AV2)
FROM TUNER
VIDEO IN
PP3004 4
FROM SYSTEM CTL
I/02 (LINE Ⓗ)
PP3005 4
I/01 (AV1 Ⓗ)
PP3005 6
INPUT/OUTPUT PACK C. B. A.
(VEP03973D: NV-SD30EO)
(VEP03973C: NV-SD40EO)
PP3005 8
PP3004 6
TP3002
Q3001
AMP
FROM SYSTEM CTL
PP3002 5
ART V. SYNC
PP3002 4
EE Ⓗ
PP3001-4 REC/PLAY
2.0Vp-p (10msec. div)
TO SYSTEM CTL
PP3001 4
VSS
PP3001 1
VIDEO OUT
PP3001 3
VIDEO IN
(dB)
(MHz) 4 4.43 (PAL) 3 3.58 (NTSC)
PP3001-1 REC/PLAY
2.2Vp-p (20μsec. div)
PP3001-3 REC
1.0Vp-p (20μsec. div)
PICTURE
+5V VR7501
(TIMER C. B. A.)
PP3002 6
IC302
TO IC801-2 HSS
L. P. F.
HSS
AMP
IC302-64 REC/PLAY
5.0Vp-p (20μsec. div)
IC302-57 REC/PLAY
2.0Vp-p (20μsec. div)
IC302-60 REC
1.0Vp-p (20μsec. div)
MUTE
CLAMP
AGC
EE
VV
CLP
DET
EE ON
LUMINANCE SIGNAL (PAL)
4MHz
4MHz L. P. F.
NLDE
DETAIL EMPHANSOR
NLE
H. P. F.
NC
LIM
DOC
YNR
Y/C MIX
NC2
PIC CONT
MAIN EMPH
W/D CLIP
MAIN EMPHASIS
12
dB
0 100K 500K 2M Hz
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
FM DEM
H. P. F.
ENV DET
+5V
(PAL) 4.8
(NTSC) 4.4
(PAL) 3.8
(NTSC) 3.4
MHz
SYNC TIP
WHITE LEVEL
FM MODU
FM MODURATION
IC302-6 REC
1.0Vp-p (50μsec. div)
IC302-8 PLAY
0.3Vp-p (50μsec. div)
4.43MHz
4.43MHz B. P. F.
R
P
630KHz B. P. F.
(PAL) (NTSC)
627KHz 629KHz
(PAL) 627K 3.8M 4.8M (Hz)
(NTSC) 629K 3.4M 4.4M (Hz)
ACC
MAIN B. M
630KHz L. P. F.
0.16Vp-p 5.06MHz
5.06MHz B. P. F.
5.06MHz
630KHz
CNR
(A1)
(A2)
P (LP)
ACC DET
SUB B. M
IC302-48 PLAY
0.8Vp-p (20μsec. div)
IC302-50 PLAY
0.1Vp-p (20μsec. div)
FROM SYSTEM CTL
PP3003 3
MESECAM Ⓗ PAL Ⓛ
MESECAM Ⓗ PAL Ⓜ NTSC Ⓛ
QR801
QR804 (NTSC Ⓛ: ON)
(NV-SD40EO)
PP3002 1
NTSC Ⓛ
5V
(A3)
ROTARY
DIGITAL M. M
VCO
AFC
DET
SIDE LOCK
KILL
ID
APC DET
90°
VXCO
X2
X801 (4.43MHz)
IC302-18 REC/PLAY
5.0Vp-p (10msec. div)
PP3002-8 REC
5.0Vp-p (20msec. div)
PP3002 8
ROTARY SW
PP3002 12
LPⒽ/SPⓁ
LP Ⓗ
(NV-SD40EO)
(NV-SD30EO)
IC302-69, 70 REC/PLAY
0.4Vp-p (20μsec. div)
LUMINANCE & CHROMINANCE PACK C. B. A.
(VEP03A01CPE: NV-SD30EO)
(VEP03A01FPE: NV-SD40EO)


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
(NV-SD40EO)
(NV-SD30EO)
IC801
IC801 | 23PIN OUT | 17PIN OUT
21PIN / 25PIN | PAL(H) | NTSC(L) | NTSC(L) | PAL(H)
PAL (H) | THROUGH | CONV | L | L
4.43NT (H) | THROUGH | THROUGH | L | L
3.58NT (L) | THROUGH | THROUGH | H | L
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
FM DEM
LIM
H.P.F.
ENV DET
MAIN EMPHASIS
P.B Y
VR306
FQ
VR304
DEV
VR303
FM MODU
FM MODURATION
(PAL) 4.8
(NTSC) 4.4
(PAL) 3.8
(NTSC) 3.4
SYNC TIP
WHITE LEVEL
Q802
AMP
6dB AMP
GCA
+45° PHASE SHIFTER
-45° PHASE SHIFTER
R820, C822, C823
R819, C820, C821
SW CONTROL
BURST GATE MMV
FH VCO
REG 5V
VR801
AFC
1/2
PHASE COMPARATOR
HD MMV
FROM IC302-54
HSS
LOGIC
PAL
NTSC
DL802
2H DELAY
1H DELAY
IC302-6 REC 1.0Vp-p (50μsec. div)
IC302-8 PLAY 0.3Vp-p (50μsec. div)
PP3003-6 REC 0.5Vp-p (20μsec. div)
IC302-34 REC 0.7Vp-p (20μsec. div)
IC302-41 PLAY 0.1Vp-p (20μsec. div)
IC302-51 PLAY 0.05Vp-p (20μsec. div)
IC302-53 PLAY 1.0Vp-p (20μsec. div)
PP3001-6 REC 0.1Vp-p (20μsec. div)
(PAL) 627K 3.8M 4.8M (Hz)
(NTSC) 629K 3.4M 4.4M (Hz)
PP3003
PP3001
PP3002
CNR
Q807
DL801
1H DELAY
VR803
CHROMA BALANCE
Q805
VR802
CHROMA PHASE
Q806
PP3002-7 PLAY 0.3Vp-p (1msec. div)
(PAL) 3.8M 4.8M (Hz)
(NTSC) 3.4M 4.4M (Hz)
Q3002
L3006 C3012
627KHz TRAP
Q3003
FREQUENCY COMPENSATOR
C3015
L3005
C3016
C3019
L3008
C3018
L3007
VR3013
LP Q ADJ
VR3012
SP Q ADJ
QR3007
QR3008
TP3001
Y BALANCE
VR301
C308, C309, L302, L303
L.P.F.
Q301, Q302
BUFFER
IC301
CLAMP
CCD
SCHMITT
(1H DELAY LINE)
VXCO
X2
IC302-69, 70 REC/PLAY 0.4Vp-p (20μsec. div)
PP3003-4 PLAY 0.4Vp-p (5msec. div)
HEAD AMP SW
ENV. SELECT
TRACKING ENV.
HEAD SW
TO/FROM SYSTEM CTL
(D1)
(D2)
(D3)
(D4)
P3001 | P501
P501-3 REC 0.5Vp-p (20μsec. div)
P501-1 REC 1.0Vp-p (2msec. div)
IC501
VR502
REC C
Q504
MIX
VR501
REC Y
AMP
P.B:ON
REC:ON
1ST & 2ND AMP
HEAD SW
H SW
ENV. SELECT
CHROMA AMP
AGC AMP
AGC DET
AT DET.
H. SW PULSE 5Vp-p 25Hz
Q502, Q503
HEAD AMP C.B.A.
(VEP05182APE:NV-SD30EO)
(VEP05182BPE:NV-SD40EO)
PS202
L
R
L'
SP-L'
SP-R'
LP-L
LP-R
R (26μm)
620±5m
L' (49μm)
R' (49μm)
L (26μm)
R (70μm)
L' (70μm)
L (70μm)
P501-9 REC 5.0Vp-p (5msec. div)
P501-5 PLAY 0.2Vp-p (10msec. div)
P501-7 PLAY 0.4Vp-p (10msec. div)

SECTION 4
SCHEMATIC DIAGRAMS

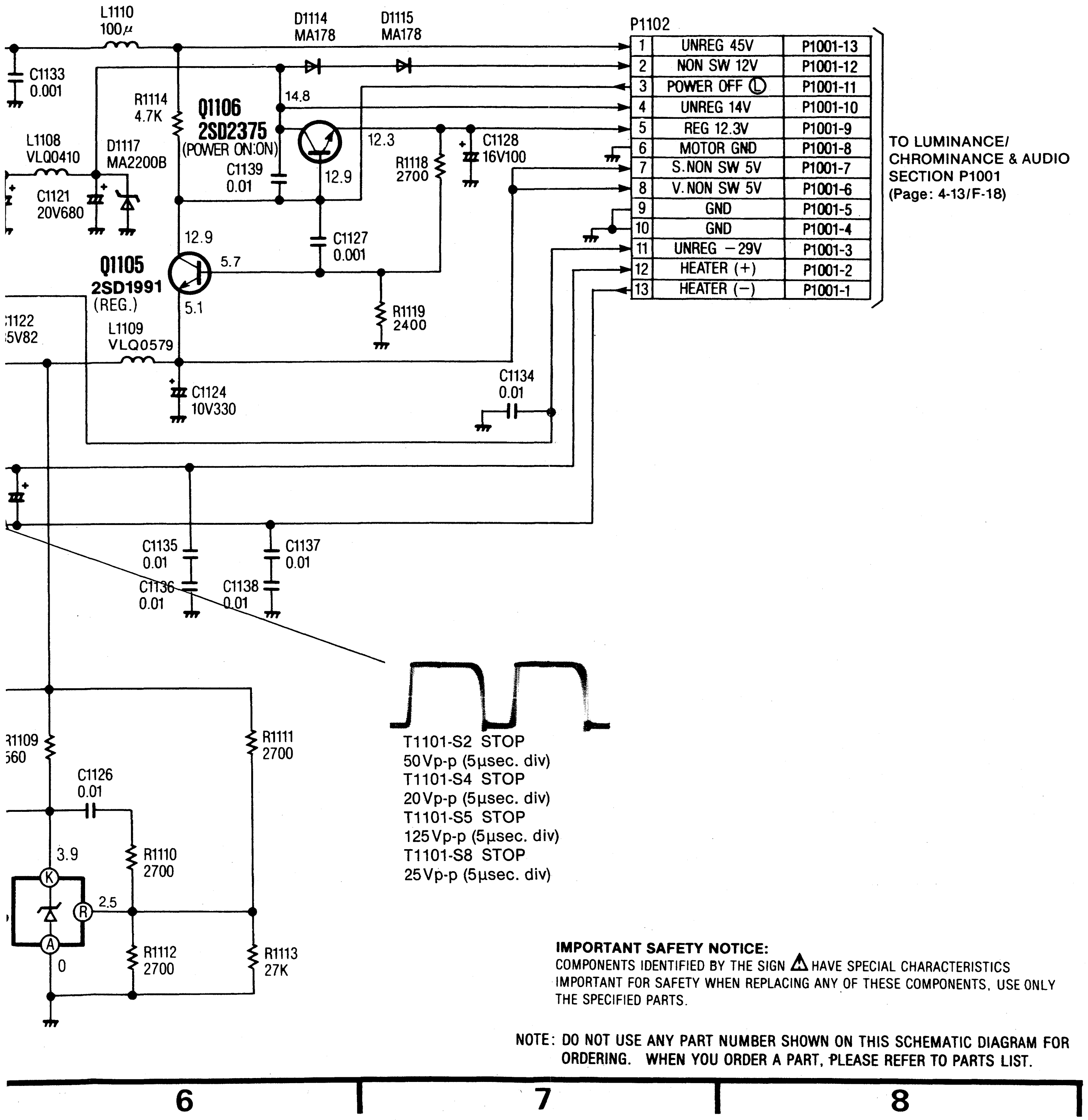
4-1. POWER SCHEMATIC DIAGRAM


(NV-SD30EV,SD40EV ONLY)
(NV-SD30EO,SD40EO ONLY)
C1101 VCC0021
C1103 VCK0046
C1102 VCK0046
C1101 VCC0024
P1101 VJS2625
F1101 VSF0107C16
L1101 ELF18D221F
C1107
R1101 330K
0.15:NV-SD30EO,SD40EO
0.1:NV-SD30EV,SD40EV
C1108
D1101 S1WBA60S
L1107 ELF18D290A
C1104 VCK0046
C1105 VCK0046
C1106 VCC0024
(NV-SD30EO,SD40EO ONLY)
C1106 VCC0021
(NV-SD30EV,SD40EV ONLY)
0.15:NV-SD30EV,SD40EV
0.22:NV-SD30EO,SD40EO
C1112 VCK0046
C1113 VCK0046
C1114 VCC0024
(NV-SD30EO, SD40EO ONLY)
C1114 VCC0022
(NV-SD30EV, SD40EV ONLY)
C1109 450V33
R1106 2.2
Q1101-C STOP
480Vp-p (5µsec. div)
T1101-P1 STOP
10Vp-p (2msec. div)
R1121 150K
R1107 68K
C1115 0.047
D1103 VSD0002
C1116 220P
D1104 AP01C
(AUTO VOLTAGE SELECTOR)
Q1101 2SC4300
114.0
0.3
0
R1104 1.2
R1102 150K
R1103 68
C1111 0.015
D1106 MA178
R1120 1K
D1105 MA165
0.3
0.6
0
D1107 MA178
D1108 MA4024H
C1110 0.12
C1117 0.012
R1105 1K
Q1102 2SD1458
0.3
0.2
0
D1102 MA165
C1129 0.022
Q1108 2SD1458
R1122 470K
R1123 470K
D1118 MA165
R1115 82
R1125 100K
C1130 16V100
0
0
0.4
R1124 10K
Q1109 2SD1996 (VOLTAGE CONTROL)
Q1101-B STOP
1.4Vp-p (5µsec. div)
T1101-B1 STOP
10Vp-p (5µsec. div)
T1101-S6 STOP
100Vp-p (5µsec. div)
T1101 VLT0699
P1
P2
B1
B2
S5
S1
S2
S6
S4
S3
S8
S7
C1131 100P
D1109 AU01Z
C1118 63V47
C1133 0.001
D1110 RL2ZPLF-C4
C1119 100P
C1120 20V680
L1108 VLQ0410
C1121 20V680
D1111 MA185
C1122 35V82
D1112 11EQS04
C1123 20V330
D1113 11EQS04
C1125 10V330
L1110 100µ
R1114 4.7K
Q1106 2SD2375 (POWER ON:ON)
D1117 MA2200B
C1139 0.01
12.9
5.7
5.1
Q1105 2SD1991 (REG.)
L1109 VLQ0579
C1124 10V330
C1135 0.01
C1136 0.01
C1138 0.01
Q1103
PS2561L1V1: NV-SD30EG,SD40EG
PS2561L1-1: NV-SD30B,SD40B
6.0
5.2
0.7
4.2
R1108 270
R1109 560
C1126 0.01
R1110 2700
R1111 2700
3.9
2.5
0
IC1101 TL431CLP
R1112 2700
R1113 27K
C
B
A
1
2
3
4
5
6

NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE T1101-B2
SECONDARY SIDE ... TP GND OF MAIN C.B.A.

NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.


L1110
100µ
D1114
MA178
D1115
MA178
P1102
C1133
0.001
R1114
4.7K
Q1106
2SD2375
(POWER ON:ON)
14.8
12.3
12.9
C1139
0.01
L1108
VLQ0410
D1117
MA2200B
C1121
20V680
C1128
16V100
R1118
2700
C1127
0.001
12.9
Q1105
2SD1991
(REG.)
5.7
5.1
R1119
2400
L1109
VLQ0579
C1122
5V82
C1124
10V330
C1134
0.01
1 UNREG 45V P1001-13
2 NON SW 12V P1001-12
3 POWER OFF Ⓛ P1001-11
4 UNREG 14V P1001-10
5 REG 12.3V P1001-9
6 MOTOR GND P1001-8
7 S.NON SW 5V P1001-7
8 V.NON SW 5V P1001-6
9 GND P1001-5
10 GND P1001-4
11 UNREG −29V P1001-3
12 HEATER (+) P1001-2
13 HEATER (−) P1001-1
TO LUMINANCE/
CHROMINANCE & AUDIO
SECTION P1001
(Page: 4-13/F-18)
C1135
0.01
C1137
0.01
C1136
0.01
C1138
0.01
T1101-S2 STOP
50Vp-p (5µsec. div)
T1101-S4 STOP
20Vp-p (5µsec. div)
T1101-S5 STOP
125Vp-p (5µsec. div)
T1101-S8 STOP
25Vp-p (5µsec. div)
R1109
560
R1111
2700
C1126
0.01
3.9
R1110
2700
K
R
A
2.5
0
R1112
2700
R1113
27K
6
7
8

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

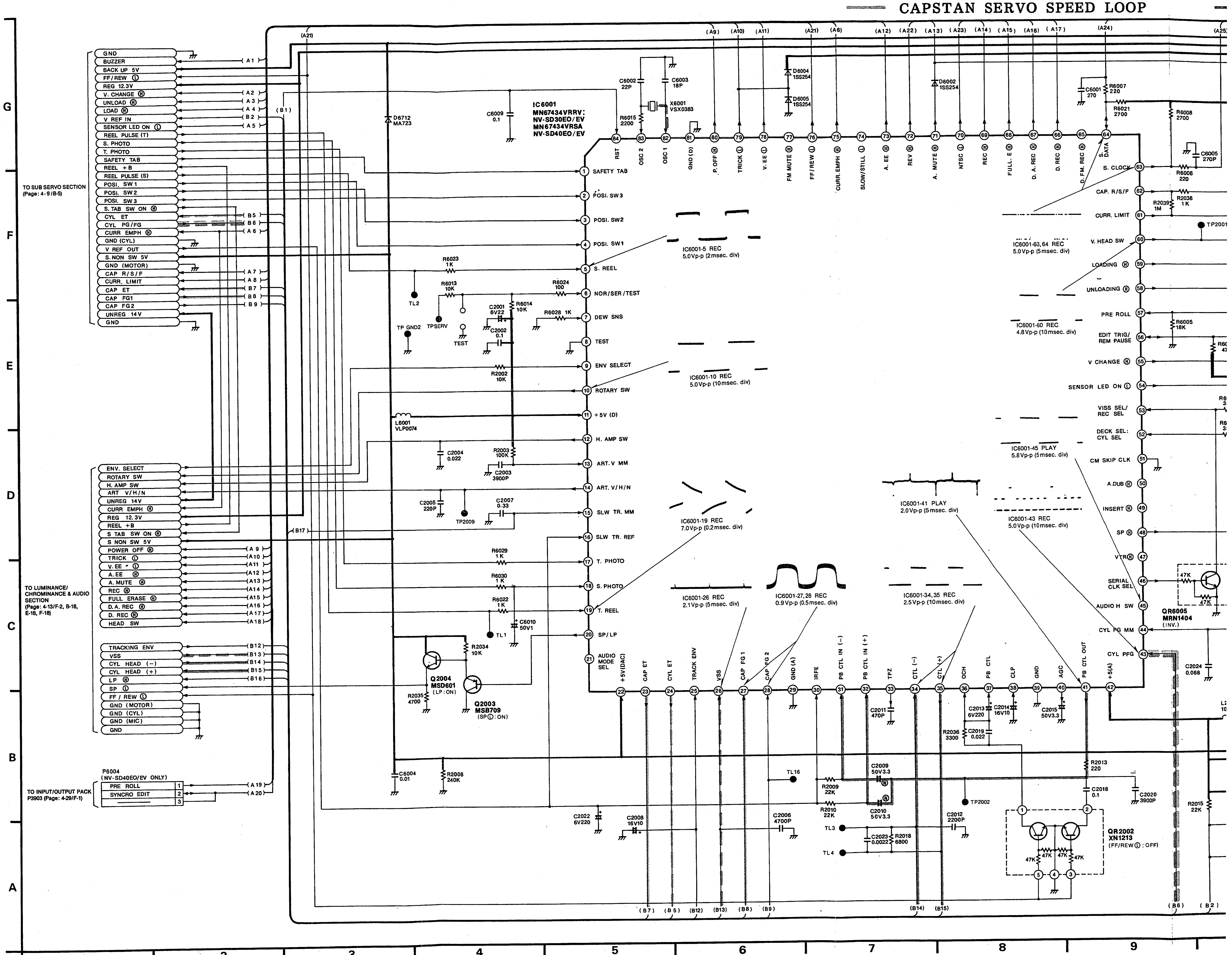
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

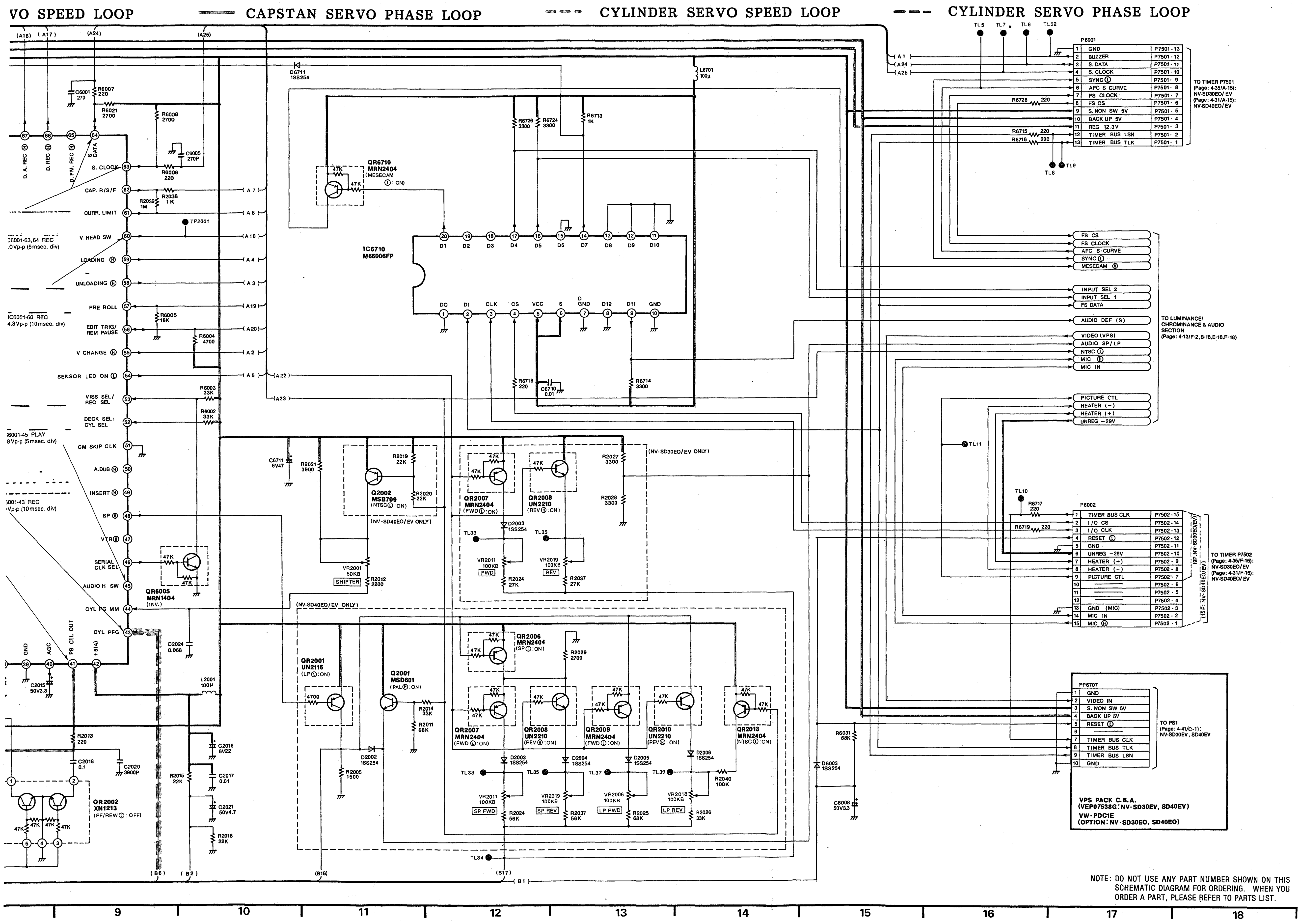
REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0.4	4.9	0	4.9	0.1	2.7	0	0	0.4	5.1	5.1	0	0	0	0	2.5	4.8	5.0	5.0	0
PLAY	0.1	4.9	0	0	0.1	5.1	0	0	4.0	1.5	5.1	0	0	0	0	2.5	4.8	5.0	5.0	0
REC	0.6	5.0	0	0	4.8	5.1	0	0	4.6	5.0	5.1	0	0	0	0	2.5	5.0	5.0	5.0	0
F.F	0	5.0	4.9	0	2.4	5.1	0	0	3.0	5.1	5.1	0	0	0	0	2.5	4.9	4.9	1.6	0
REW	0	5.1	5.1	0	1.6	5.1	0	0	2.6	5.1	5.1	0	0	0	0	2.5	4.7	4.9	1.7	0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	5.0	5.1	0.2	2.5	0.3	2.2	2.0	2.5	0	2.5	2.4	2.0	5.0	0	2.0	2.0	2.0	2.5	2.2	2.5
PLAY	5.1	5.1	2.6	2.4	3.8	2.5	2.5	2.5	0	2.5	2.7	2.4	5.0	0	0	0	2.5	2.5	0	2.8
REC	0	5.1	2.7	2.5	0.4	2.5	2.5	2.5	0	2.5	2.4	2.7	5.0	3.5	3.7	0	2.5	2.5	0	2.5
F.F	5.1	5.1	2.2	2.5	2.7	2.5	2.5	2.5	0	2.5	2.5	2.6	5.0	0	0	0	2.5	1.6	0	2.9
REW	5.1	5.1	2.3	2.4	2.1	2.8	2.1	2.3	0	2.5	2.5	2.6	5.0	2.6	2.6	2.0	2.5	1.8	0	2.9
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.5	5.1	1.4	3.6	0	4.3	0	5.1	0	0	0	5.0	1.4	5.1	5.0	5.1	0	0	0	0.3
PLAY	2.4	5.1	0.8	3.8	3.8	4.5	0	5.1	0	0	0	0	1.3	0	0	0	0	0	0	0
REC	2.5	5.1	0.8	3.8	0	4.6	0	0	0	0	0	5.1	1.3	0.1	5.1	5.1	0	0	0	5.1
F.F	2.5	5.1	1.5	3.7	0	4.3	0	5.1	0	0	0	5.1	1.3	0.1	0	5.1	0	0	0	5.1
REW	2.5	5.1	1.1	3.7	0	4.4	0	5.1	0	0	0	4.9	1.0	0.1	0	5.1	0	0	0	5.0
REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	5.1	2.1	4.6	4.0	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	5.0	0	0	5.1	0
PLAY	5.1	0	4.9	4.5	0	0	0	0	0.3	5.1	0	0	0	0	0.1	5.0	0	5.1	5.1	0
REC	5.1	0	4.6	4.4	5.1	5.1	5.1	5.1	5.1	5.1	0	0	5.1	0	0.1	5.0	0	0	5.1	0
F.F	5.1	0	4.6	4.6	0	0	0	0	0.3	5.1	0	0	5.1	0	0.1	0	0	0	5.1	0
REW	5.1	5.1	4.6	4.6	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	0	0	0	5.1	0
REF. NO.	IC6001																			
MODE	81	82	83	84																
STOP	0	2.6	2.6	3.9																
PLAY	0	2.6	2.6	4.1																
REC	0	2.6	2.6	4.3																
F.F	0	2.6	2.6	4.1																
REW	0	2.6	2.6	3.9																
REF. NO.	IC6710																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0.1	0.1	0.5	5.1
PLAY	0	3.9	4.9	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	2.2	0	5.1	0.1	0.1	0.5	5.1
REC	0	4.1	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0.1	0.1	2.2	5.1
F.F	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.0	0.1	0.1	0.5	4.8
REW	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0	0.1	2.2	5.1

SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART (SP MODE)

REF. NO.	Q2001			Q2002			Q2003			Q2004								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	2.9	5.1	3.4	5.1	4.8	5.1	0.6	0	0	0.3	5.1	0.6						
PLAY	2.9	5.1	3.4	5.1	4.7	5.1	0.6	0	0	0.3	5.1	0.6						
REC	2.9	5.1	3.3	5.1	4.7	5.1	0.6	0	0	0.3	5.1	0.6						
F.F	2.9	5.1	3.4	5.1	4.6	5.0	0.6	0	0	0.3	5.1	0.6						
REW	2.9	5.1	3.5	5.1	4.8	5.1	0.6	0	0	0.3	5.1	0.6						
REF. NO.	QR2001			QR2002						QR2006			QR2007			QR2008		
MODE	E	C	B	1	2	3	4	5		E	C	B	E	C	B	E	C	B
STOP	5.1	0.3	5.1	0	0	5.0	1.8	5.0		5.1	5.1	0.3	5.1	0	5.1	0	5.1	5.1
PLAY	5.1	0.2	5.1	0	0	5.0	0	5.0		0	5.1	0.2	5.1	5.1	0	0.3	5.1	0
REC	5.1	0.2	5.1	0	0	5.0	0	5.0		5.1	5.1	0.2	5.1	5.1	0	0.2	5.1	0
F.F	5.1	0.2	5.1	0	2.0	0	0	0		4.3	5.1	0.2	5.1	5.0	0	0.3	5.1	0
REW	5.1	0.3	5.1	0	1.2	0	0	0		5.1	5.1	0.3	5.1	3.0	5.1	4.5	5.1	5.1
REF. NO.	QR2009			QR2010			QR6005			QR6710								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0.3	−0.2	5.1	0.4	0.3	5.1	0	1.1	4.1	5.1	0.3	5.0						
PLAY	0.2	−0.3	0	−0.1	0.2	0	0	1.1	4.1	5.1	0.3	4.9						
REC	0.2	−0.2	0	−0.1	0.2	0	0	1.4	3.7	5.1	0.3	5.1						
F.F	0.2	−3.7	0	−0.1	0.2	0	0	1.4	3.5	5.1	0.3	4.9						
REW	0.4	−1.0	5.1	0.4	0.4	5.1	0	1.4	3.7	5.1	0.3	4.9						

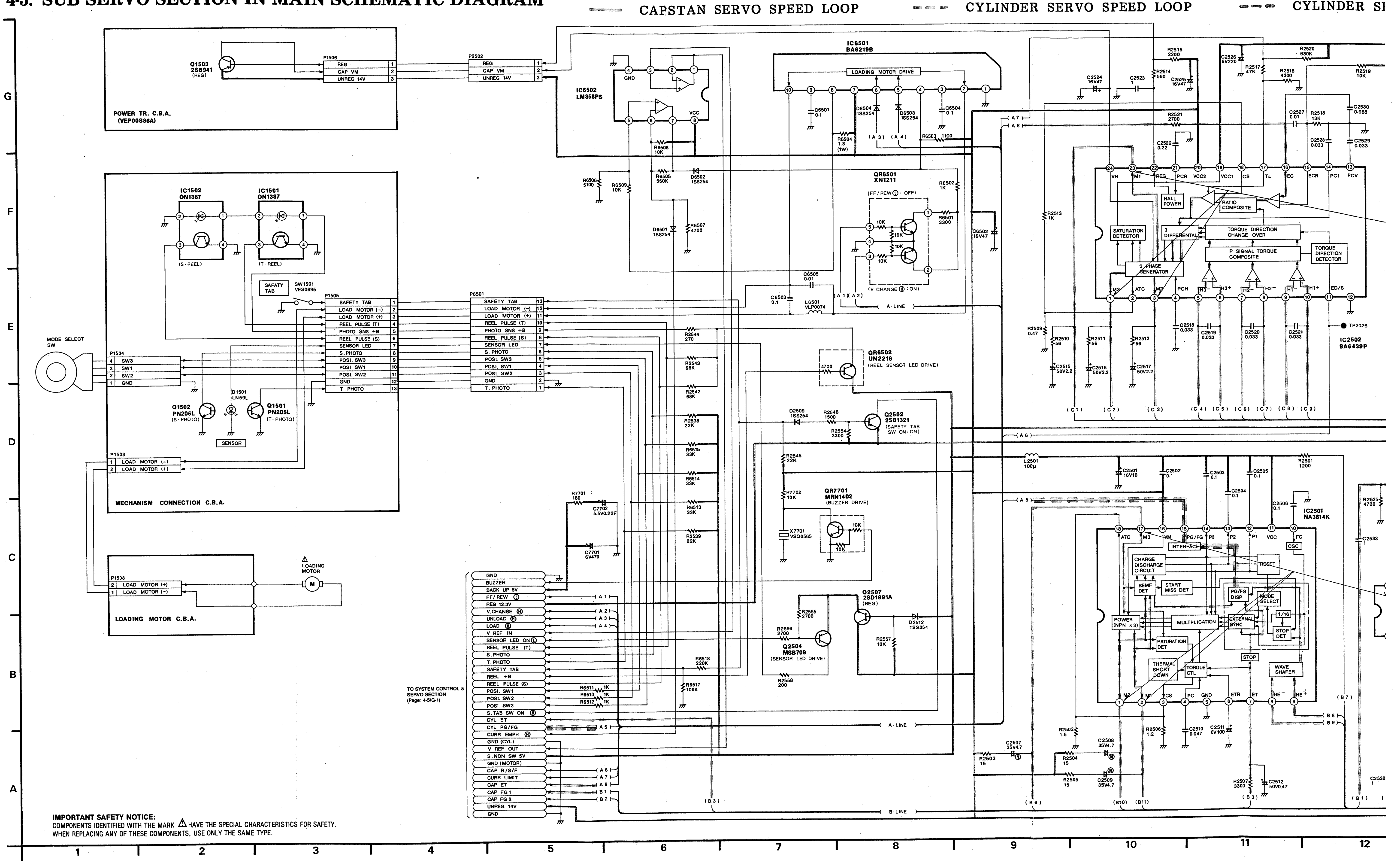
4-2. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM


CAPSTAN SERVO SPEED LOOP
TO SUB SERVO SECTION (Page: 4-9/B-5)
GND
BUZZER
BACK UP 5V
FF/REW Ⓛ
REG 12.3V
V. CHANGE Ⓗ
UNLOAD Ⓗ
LOAD Ⓗ
V REF IN
SENSOR LED ON Ⓛ
REEL PULSE (T)
S. PHOTO
T. PHOTO
SAFETY TAB
REEL +B
REEL PULSE (S)
POSI. SW1
POSI. SW2
POSI. SW3
S. TAB SW ON Ⓗ
CYL ET
CYL PG/FG
CURR EMPH Ⓗ
GND (CYL)
V REF OUT
S. NON SW 5V
GND (MOTOR)
CAP R/S/F
CURR. LIMIT
CAP ET
CAP FG1
CAP FG2
UNREG 14V
GND
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION (Page: 4-13/F-2, B-18, E-18, F-18)
ENV. SELECT
ROTARY SW
H. AMP SW
ART V/H/N
UNREG 14V
CURR EMPH Ⓗ
REG 12.3V
REEL +B
S TAB SW ON Ⓗ
S NON SW 5V
POWER OFF Ⓗ
TRICK Ⓛ
V. EE Ⓛ
A. EE Ⓗ
A. MUTE Ⓗ
REC Ⓗ
FULL ERASE Ⓗ
D. A. REC Ⓗ
D. REC Ⓗ
HEAD SW
TRACKING ENV
VSS
CYL HEAD (−)
CYL HEAD (+)
LP Ⓗ
SP Ⓛ
FF / REW Ⓛ
GND (MOTOR)
GND (CYL)
GND (MIC)
GND
TO INPUT/OUTPUT PACK P3903 (Page: 4-29/F-1)
P6004 (NV-SD40EO/EV ONLY)
PRE ROLL
SYNCRO EDIT
IC6001 MN67434VRRV; NV-SD30EO/EV MN67434VRSA NV-SD40EO/EV
D6712 MA723
C6009 0.1
C6002 22P
C6003 18P
X6001 VSX0383
R6015 2200
D6004 1SS254
D6005 1SS254
D6002 1SS254
C6001 270
R6007 220
R6021 2700
R6008 2700
C6005 270P
R6006 220
R2039 1M
R2038 1K
TP2001
R6005 18K
RST
OSC 2
OSC 1
GND (D)
P. OFF Ⓗ
TRICK Ⓛ
V. EE Ⓛ
FM MUTE Ⓗ
FF/REW Ⓛ
CURR. EMPH Ⓗ
SLOW/STILL Ⓛ
A. EE Ⓗ
REV Ⓗ
A. MUTE Ⓗ
NTSC Ⓛ
REC Ⓗ
FULL. E Ⓗ
D. A. REC Ⓗ
D. REC Ⓗ
D. FM. REC Ⓗ
S. DATA
S. CLOCK
CAP. R/S/F
CURR. LIMIT
V. HEAD SW
LOADING Ⓗ
UNLOADING Ⓗ
PRE ROLL
EDIT TRIG/ REM PAUSE
V CHANGE Ⓗ
SENSOR LED ON Ⓛ
VISS SEL/ REC SEL
DECK SEL: CYL SEL
CM SKIP CLK
A.DUB Ⓗ
INSERT Ⓗ
SP Ⓗ
VTR Ⓗ
SERIAL CLK SEL
AUDIO H SW
CYL PG MM
CYL PFG
QR6005 MRN1404 (INV.)
C2024 0.068
1 SAFETY TAB
2 POSI. SW3
3 POSI. SW2
4 POSI. SW1
5 S. REEL
6 NOR/SER/TEST
7 DEW SNS
8 TEST
9 ENV SELECT
10 ROTARY SW
11 +5V (D)
12 H. AMP SW
13 ART. V MM
14 ART. V/H/N
15 SLW TR. MM
16 SLW TR. REF
17 T. PHOTO
18 S. PHOTO
19 T. REEL
20 SP/LP
21 AUDIO MODE SEL
+5V(DAC)
CAP ET
CYL ET
TRACK ENV
VSS
CAP FG 1
CAP FG 2
GND (A)
IRFE
PB CTL IN (−)
PB CTL IN (+)
TPZ
CTL (−)
CTL (+)
OCH
PB CTL
CLP
GND
AGC
PB CTL OUT
+5(A)
R6023 1K
R6013 10K
TL2
TP GND2
TPSERV
TEST
C2001 6V22
R6014 10K
C2002 0.1
R6024 100
R6028 1K
R2002 10K
L6001 VLP0074
C2004 0.022
R2003 100K
C2003 3900P
C2005 220P
TP2009
C2007 0.33
R6029 1K
R6030 1K
R6022 1K
C6010 50V1
TL1
R2034 10K
Q2004 MSD601 (LP: ON)
R2035 4700
Q2003 MSB709 (SPⓁ: ON)
C6004 0.01
R2008 240K
C2022 6V220
C2008 16V10
C2006 4700P
TL16
R2009 22K
R2010 22K
C2009 50V3.3
C2010 50V3.3
TL3
TL4
C2023 0.0022
R2018 6800
C2011 470P
C2012 2200P
TP2002
C2013 6V220
C2014 16V10
R2036 3300
C2019 0.022
C2015 50V3.3
R2013 220
C2018 0.1
C2020 3900P
R2015 22K
QR2002 XN1213 (FF/REWⓁ: OFF)
47K
IC6001-5 REC 5.0Vp-p (2msec. div)
IC6001-10 REC 5.0Vp-p (10msec. div)
IC6001-19 REC 7.0Vp-p (0.2msec. div)
IC6001-26 REC 2.1Vp-p (5msec. div)
IC6001-27,28 REC 0.9Vp-p (0.5msec. div)
IC6001-34,35 REC 2.5Vp-p (10msec. div)
IC6001-41 PLAY 2.0Vp-p (5msec. div)
IC6001-43 REC 5.0Vp-p (10msec. div)
IC6001-45 PLAY 5.6Vp-p (5msec. div)
IC6001-60 REC 4.8Vp-p (10msec. div)
IC6001-63,64 REC 5.0Vp-p (5msec. div)
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 A18 A19 A20 A21 A22 A23 A24 A25
B1 B2 B5 B6 B7 B8 B9 B12 B13 B14 B15 B16 B17
G F E D C B A
1 2 3 4 5 6 7 8 9


VO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
IC6710 M66006FP
QR6710 MRN2404 (MESECAM Ⓛ: ON)
D6711 1SS254
L6701 100µ
R6726 3300
R6724 3300
R6713 1K
R6718 220
C6710 0.01
R6714 3300
R6007 220
C6001 270
R6021 2700
R6008 2700
C6005 270P
R6006 220
R2038 1K
R2039 1M
TP2001
R6005 18K
R6004 4700
R6003 33K
R6002 33K
QR6005 MRN1404 (INV.)
S. CLOCK
CAP. R/S/F
CURR. LIMIT
V. HEAD SW
LOADING Ⓗ
UNLOADING Ⓗ
PRE ROLL
EDIT TRIG/ REM PAUSE
V CHANGE Ⓗ
SENSOR LED ON Ⓛ
VISS SEL/ REC SEL
DECK SEL: CYL SEL
CM SKIP CLK
A.DUB Ⓗ
INSERT Ⓗ
SP Ⓗ
VTR Ⓗ
SERIAL CLK SEL
AUDIO H SW
CYL PG MM
CYL PFG
GND
AGC
PB CTL OUT
+5(A)
C2015 50V3.3
R2013 220
C2018 0.1
C2020 3900P
QR2002 XN1213 (FF/REW Ⓛ : OFF)
C2024 0.068
L2001 100µ
C2016 6V22
C2017 0.01
C2021 50V4.7
R2015 22K
R2016 22K
C6711 6V47
R2021 3900
R2019 22K
R2020 22K
Q2002 MSB709 (NTSC Ⓛ:ON)
VR2001 50KB SHIFTER
R2012 2200
(NV-SD40EO/EV ONLY)
(NV-SD30EO/EV ONLY)
QR2007 MRN2404 (FWD Ⓛ:ON)
QR2008 UN2210 (REV Ⓗ:ON)
R2027 3300
R2028 3300
D2003 1SS254
TL33
TL35
VR2011 100KB FWD
R2024 27K
VR2019 100KB REV
R2037 27K
QR2001 UN2116 (LP Ⓛ:ON)
Q2001 MSD601 (PAL Ⓗ:ON)
QR2006 MRN2404 (SP Ⓛ:ON)
R2029 2700
R2014 33K
R2011 68K
D2002 1SS254
R2005 1500
QR2009 MRN2404 (FWD Ⓛ:ON)
QR2010 UN2210 (REV Ⓗ:ON)
QR2013 MRN2404 (NTSC Ⓛ:ON)
D2004 1SS254
D2005 1SS254
D2006 1SS254
TL37
TL39
R2040 100K
VR2011 100KB SP FWD
VR2019 100KB SP REV
VR2006 100KB LP FWD
VR2018 100KB LP REV
R2024 56K
R2037 56K
R2025 68K
R2026 33K
TL34
R6031 68K
D6003 1SS254
C6008 50V3.3
TL5 TL7 TL6 TL32
TL8 TL9 TL10 TL11
R6728 220
R6715 220
R6716 220
R6717 220
R6719 220
P6001
1 GND P7501-13
2 BUZZER P7501-12
3 S. DATA P7501-11
4 S. CLOCK P7501-10
5 SYNC Ⓛ P7501-9
6 AFC S CURVE P7501-8
7 FS CLOCK P7501-7
8 FS CS P7501-6
9 S. NON SW 5V P7501-5
10 BACK UP 5V P7501-4
11 REG 12.3V P7501-3
12 TIMER BUS LSN P7501-2
13 TIMER BUS TLK P7501-1
TO TIMER P7501 (Page: 4-35/A-15): NV-SD30EO/EV (Page: 4-31/A-15): NV-SD40EO/EV
FS CS
FS CLOCK
AFC S-CURVE
SYNC Ⓛ
MESECAM Ⓗ
INPUT SEL 2
INPUT SEL 1
FS DATA
AUDIO DEF (S)
VIDEO (VPS)
AUDIO SP/LP
NTSC Ⓛ
MIC Ⓗ
MIC IN
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION (Page: 4-13/F-2, B-18, E-18, F-18)
PICTURE CTL
HEATER (−)
HEATER (+)
UNREG −29V
P6002
1 TIMER BUS CLK P7502-15
2 I/O CS P7502-14
3 I/O CLK P7502-13
4 RESET Ⓛ P7502-12
5 GND P7502-11
6 UNREG −29V P7502-10
7 HEATER (+) P7502-9
8 HEATER (−) P7502-8
9 PICTURE CTL P7502-7
10 P7502-6
11 P7502-5
12 P7502-4
13 GND (MIC) P7502-3
14 MIC IN P7502-2
15 MIC Ⓗ P7502-1
(9P: NV-SD30EO/EV)
(15P: NV-SD40EO/EV)
TO TIMER P7502 (Page: 4-35/F-15): NV-SD30EO/EV (Page: 4-31/F-15): NV-SD40EO/EV
PP6707
1 GND
2 VIDEO IN
3 S. NON SW 5V
4 BACK UP 5V
5 RESET Ⓛ
6
7 TIMER BUS CLK
8 TIMER BUS TLK
9 TIMER BUS LSN
10 GND
TO PS1 (Page: 4-41/C-1): NV-SD30EV, SD40EV
VPS PACK C.B.A. (VEP07538G: NV-SD30EV, SD40EV)
VW-PDC1E (OPTION: NV-SD30EO, SD40EO)
9 10 11 12 13 14 15 16 17 18

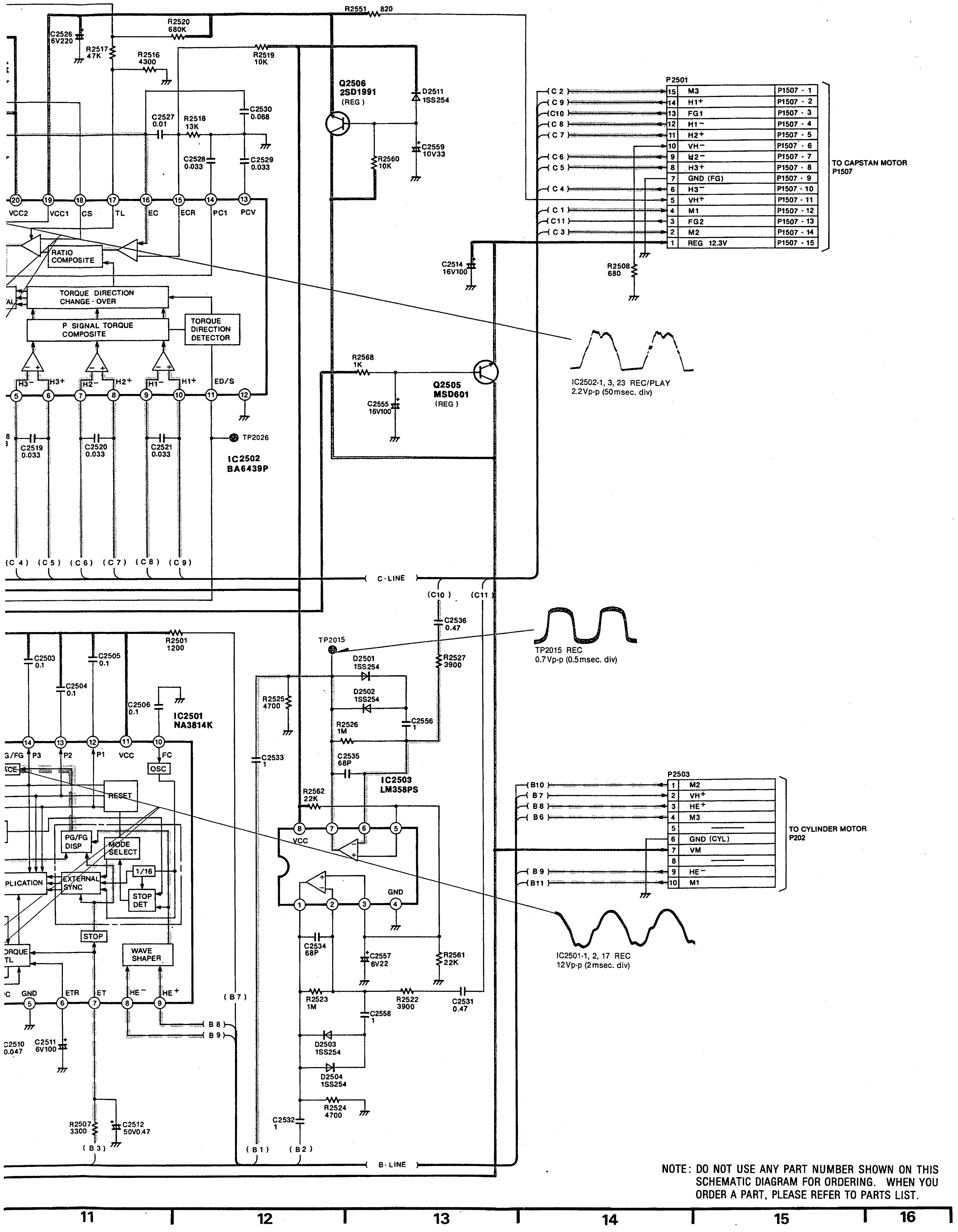
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-3. SUB SERVO SECTION IN MAIN SCHEMATIC DIAGRAM


CAPSTAN SERVO SPEED LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SI
Q1503 2SB941 (REG)
P1506 REG CAP VM UNREG 14V
P2502 REG CAP VM UNREG 14V
POWER TR. C.B.A. (VEP00S86A)
IC6502 LM358PS
IC6501 BA6219B
LOADING MOTOR DRIVE
C6501 0.1
D6504 1SS254
D6503 1SS254
C6504 0.1
R6504 1.8 (1W)
R6503 1100
R6508 10K
R6505 560K
D6502 1SS254
R6506 5100
R6509 10K
D6501 1SS254
R6507 4700
QR6501 XN1211
(FF/REW Ⓛ : OFF)
(V CHANGE Ⓗ : ON)
R6502 1K
R6501 3300
C6502 16V47
C6505 0.01
C6503 0.1
L6501 VLP0074
A-LINE
IC1502 ON1387
IC1501 ON1387
(S-REEL)
(T-REEL)
SAFATY TAB
SW1501 VES0695
P1505
SAFETY TAB
LOAD MOTOR (−)
LOAD MOTOR (+)
REEL PULSE (T)
PHOTO SNS +B
REEL PULSE (S)
SENSOR LED
S.PHOTO
POSI. SW3
POSI. SW1
POSI. SW2
GND
T.PHOTO
P6501
MODE SELECT SW
P1504 SW3 SW1 SW2 GND
D1501 LN59L
Q1502 PN205L (S-PHOTO)
Q1501 PN205L (T-PHOTO)
SENSOR
P1503 LOAD MOTOR (−) LOAD MOTOR (+)
MECHANISM CONNECTION C.B.A.
R2544 270
R2543 68K
R2542 68K
R2538 22K
R6515 33K
R6514 33K
R6513 33K
R2539 22K
QR6502 UN2216 (REEL SENSOR LED DRIVE)
D2509 1SS254
R2546 1500
R2554 3300
Q2502 2SB1321 (SAFETY TAB SW ON: ON)
R2545 22K
R7702 10K
QR7701 MRN1402 (BUZZER DRIVE)
X7701 VSQ0565
R7701 180
C7702 5.5V0.22F
C7701 6V470
LOADING MOTOR
P1508 LOAD MOTOR (+) LOAD MOTOR (−)
LOADING MOTOR C.B.A.
GND
BUZZER
BACK UP 5V
FF/REW Ⓛ
REG 12.3V
V.CHANGE Ⓗ
UNLOAD Ⓗ
LOAD Ⓗ
V REF IN
SENSOR LED ONⓁ
REEL PULSE (T)
S.PHOTO
T.PHOTO
SAFETY TAB
REEL +B
REEL PULSE (S)
POSI. SW1
POSI. SW2
POSI. SW3
S.TAB SW ON Ⓗ
CYL ET
CYL PG/FG
CURR EMPH Ⓗ
GND (CYL)
V REF OUT
S.NON SW 5V
GND (MOTOR)
CAP R/S/F
CURR LIMIT
CAP ET
CAP FG1
CAP FG2
UNREG 14V
GND
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-5/G-1)
R6511 1K
R6510 1K
R6512 1K
R6518 220K
R6517 100K
R2555 2700
R2556 2700
Q2504 MSB709 (SENSOR LED DRIVE)
R2558 200
Q2507 2SD1991A (REG)
D2512 1SS254
R2557 10K
B-LINE
IC2502 BA6439P
VH M1 REG PCR VCC2 VCC1 CS TL EC ECR PC1 PCV
HALL POWER
RATIO COMPOSITE
SATURATION DETECTOR
3 DIFFERENTAL
TORQUE DIRECTION CHANGE-OVER
P SIGNAL TORQUE COMPOSITE
TORQUE DIRECTION DETECTOR
3 PHASE GENERATOR
M3 ATC M2 PCH H3− H3+ H2− H2+ H1− H1+ ED/S
TP2026
R2515 2200
R2514 560
R2520 680K
C2526 6V220
R2517 47K
R2516 4300
R2519 10K
C2524 16V47
C2523 1
C2525 16V47
R2521 2700
C2527 0.01
R2518 13K
C2530 0.068
C2522 0.22
C2528 0.033
C2529 0.033
R2513 1K
R2509 0.47
R2510 56
R2511 56
R2512 56
C2515 50V2.2
C2516 50V2.2
C2517 50V2.2
C2518 0.033
C2519 0.033
C2520 0.033
C2521 0.033
L2501 100μ
C2501 16V10
C2502 0.1
C2503 0.1
C2504 0.1
C2505 0.1
R2501 1200
C2506 0.1
R2525 4700
C2533 1
IC2501 NA3814K
ATC M3 VM PG/FG P3 P2 P1 VCC FC
INTERFACE
OSC
CHARGE DISCHARGE CIRCUIT
RESET
BEMF DET
START MISS DET
PG/FG DISP
MODE SELECT
POWER (NPN ×3)
MULTIPLICATION
EXTERNAL SYNC
1/16
STOP DET
RATURATION DET
STOP
THERMAL SHORT DOWN
TORQUE CTL
WAVE SHAPER
M2 M1 CS PC GND ETR ET HE− HE+
R2502 1.5
C2507 35V4.7
R2503 15
C2508 35V4.7
R2504 15
R2505 15
C2509 35V4.7
R2506 1.2
C2510 0.047
C2511 6V100
R2507 3300
C2512 50V0.47
C2532 1
G F E D C B A
1 2 3 4 5 6 7 8 9 10 11 12

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CYLINDER SERVO PHASE LOOP


R2520 680K
R2551 820
C2526 6V220
R2517 47K
R2516 4300
R2519 10K
C2527 0.01
R2518 13K
C2530 0.068
C2528 0.033
C2529 0.033
Q2506 2SD1991 (REG)
D2511 1SS254
C2559 10V33
R2560 10K
P2501
M3
H1+
FG1
H1−
H2+
VH−
H2−
H3+
GND (FG)
H3−
VH+
M1
FG2
M2
REG 12.3V
P1507 - 1
P1507 - 2
P1507 - 3
P1507 - 4
P1507 - 5
P1507 - 6
P1507 - 7
P1507 - 8
P1507 - 9
P1507 - 10
P1507 - 11
P1507 - 12
P1507 - 13
P1507 - 14
P1507 - 15
TO CAPSTAN MOTOR P1507
VCC2
VCC1
CS
TL
EC
ECR
PC1
PCV
RATIO COMPOSITE
TORQUE DIRECTION CHANGE - OVER
P SIGNAL TORQUE COMPOSITE
TORQUE DIRECTION DETECTOR
ED/S
C2514 16V100
R2508 680
R2568 1K
C2555 16V100
Q2505 MSD601 (REG)
IC2502-1, 3, 23 REC/PLAY
2.2Vp-p (50msec. div)
C2519 0.033
C2520 0.033
C2521 0.033
TP2026
IC2502 BA6439P
C-LINE
C2536 0.47
TP2015
TP2015 REC
0.7Vp-p (0.5msec. div)
R2501 1200
C2503 0.1
C2505 0.1
C2504 0.1
C2506 0.1
IC2501 NA3814K
D2501 1SS254
D2502 1SS254
R2527 3900
R2525 4700
R2526 1M
C2556 1
C2533 1
C2535 68P
R2562 22K
IC2503 LM358PS
P2503
M2
VH+
HE+
M3
GND (CYL)
VM
HE−
M1
TO CYLINDER MOTOR P202
RESET
PG/FG DISP
MODE SELECT
EXTERNAL SYNC
1/16
STOP DET
OSC
STOP
WAVE SHAPER
IC2501-1, 2, 17 REC
12Vp-p (2msec. div)
C2534 68P
C2557 6V22
R2561 22K
R2523 1M
R2522 3900
C2531 0.47
C2558 1
D2503 1SS254
D2504 1SS254
R2524 4700
C2532 1
C2510 0.047
C2511 6V100
R2507 3300
C2512 50V0.47
B-LINE
11
12
13
14
15
16

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SUB SERVO ICs DC VOLTAGE CHART (SP MODE)

REF. NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	14.4	14.4	0.1	0.5	0	2.5	2.5	0.6	0.6	2.6	5.1	3.7	3.6	3.8	0.8	13.9	14.4	0.1		
PLAY	14.1	12.8	0.1	0.6	0	2.5	2.4	0.6	0.6	2.6	5.1	3.6	3.6	3.6	1.4	13.7	14.2	0.1		
REC	13.7	14.0	0.1	0.6	0	2.5	2.5	0.6	0.6	2.6	5.1	3.6	3.8	3.7	1.4	13.6	14.0	0.1		
F.F	13.0	13.9	0.1	0.5	0	2.5	2.5	0.6	0.6	2.6	5.1	3.7	3.8	3.6	1.1	13.7	14.1	0.1		
REW	12.7	13.9	0.1	0.6	0	2.5	2.5	0.6	0.6	2.7	5.1	3.7	3.7	3.7	1.4	13.6	13.8	0.1		
REF. NO.	IC2502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.0	0	2.0	1.5	2.3	2.3	2.3	2.3	2.3	2.3	2.1	0	0	0.4	2.9	0.2	0.4	0	5.1	13.9
PLAY	2.8	0.1	2.8	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.7	0.4	0.1	5.1	13.7
REC	2.7	0.1	2.7	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.7	0.4	0.1	5.1	13.7
F.F	7.4	0.1	7.1	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.6	0.7	2.9	2.5	0.4	0.1	5.1	13.7
REW	7.3	0.1	5.6	1.5	2.3	2.3	2.3	2.3	2.3	2.3	5.1	0	0.7	0.7	2.9	2.4	0.4	0.1	5.0	13.6
REF. NO.	IC2502																			
MODE	21	22	23	24																
STOP	1.3	13.2	2.0	4.5																
PLAY	2.0	12.4	0.1	4.5																
REC	2.0	12.3	0.7	4.5																
F.F	11.5	3.5	7.3	13.5																
REW	11.5	12.2	7.2	13.5																
REF. NO.	IC2503																			
MODE	1	2	3	4	5	6	7	8												
STOP	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
PLAY	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REC	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
F.F	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REW	2.5	2.6	2.6	0	2.6	2.6	2.6	5.1												
REF. NO.	IC6501										IC6502									
MODE	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8		
STOP	0	0.3	0.1	6.7	0	0	13.9	13.9	0.1	0.3	2.5	2.5	2.5	0	4.7	0.7	12.7	13.9		
PLAY	0	0.5	0.1	6.6	0	0	13.7	13.7	0.1	0.5	2.5	2.5	2.5	0	4.6	0.7	12.4	13.7		
REC	0	0.3	0.1	6.5	0	0	13.5	13.5	0.1	0.3	2.6	2.6	2.5	0	4.6	0.7	12.3	13.5		
F.F	0	0.2	0.1	13.6	0	0	13.7	13.7	0.1	0.2	2.5	2.5	2.5	0	4.6	0.7	13.1	13.7		
REW	0	0.8	0.4	13.5	0	0	13.6	13.6	0.1	0.5	2.5	2.5	2.5	0	4.6	0.7	13.1	13.6		

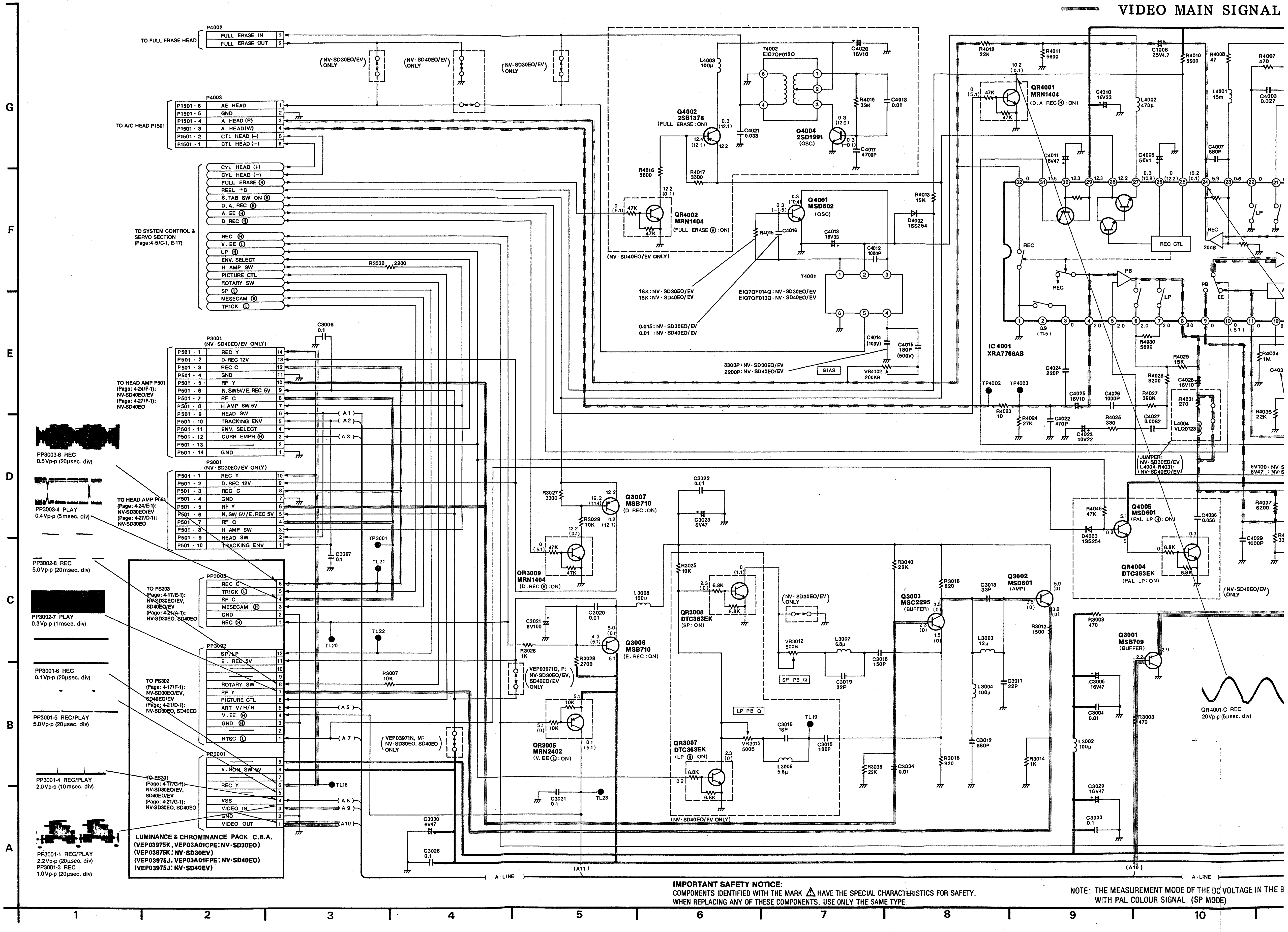
SUB SERVO TRANSISTORs DC VOLTAGE CHART (SP MODE)

REF. NO.	Q2502			Q2504			Q2505			Q2506			Q2507					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	12.2	12.2	11.5	5.2	−0.1	5.1	11.5	13.9	12.2	5.1	13.9	5.7	5.2	13.9	5.7			
PLAY	12.2	12.2	11.5	5.0	5.0	4.3	11.5	13.7	12.2	5.1	13.7	5.7	5.0	13.7	5.7			
REC	12.2	12.1	11.5	5.0	5.0	4.3	11.5	13.5	12.2	5.1	13.5	5.7	5.0	13.5	5.7			
F.F	12.2	12.2	11.5	5.0	5.0	4.3	11.5	13.7	12.2	5.1	13.7	5.7	5.0	13.7	5.7			
REW	12.2	12.2	11.5	5.0	5.0	4.2	11.5	13.6	12.2	5.1	13.6	5.7	5.0	13.6	5.7			
REF. NO.	QR6501						QR6502											
MODE	1	2	3	4	5		E	C	B									
STOP	0	0.1	5.0	0	5.0		5.0	5.1	6.8									
PLAY	0	0.1	5.0	0	5.0		5.0	5.1	6.8									
REC	0	0.1	5.1	0	5.0		5.1	5.1	9.8									
F.F	13.4	13.6	0	0	0		5.0	5.1	6.8									
REW	13.5	13.5	0	0.1	0		5.0	5.1	6.8									

4-4. LUMINANCE/CHROMINANCE & AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL

VIDEO MAIN SIGNAL


TO FULL ERASE HEAD
P4002
FULL ERASE IN
FULL ERASE OUT
(NV-SD30EO/EV) ONLY
(NV-SD40EO/EV) ONLY
TO A/C HEAD P1501
P4003
AE HEAD
GND
A HEAD (R)
A HEAD (W)
CTL HEAD (-)
CTL HEAD (+)
TO SYSTEM CONTROL & SERVO SECTION (Page:4-5/C-1, E-17)
CYL HEAD (+)
CYL HEAD (-)
FULL ERASE
REEL +B
S.TAB SW ON
D.A. REC
A. EE
D REC
REC
V. EE
LP
ENV. SELECT
H AMP SW
PICTURE CTL
ROTARY SW
SP
MESECAM
TRICK
TO HEAD AMP P501 (Page: 4-24/F-1): NV-SD40EO/EV (Page: 4-27/F-1): NV-SD40EO
P3001 (NV-SD40EO/EV ONLY)
REC Y
D.REC 12V
REC C
GND
RF Y
N.SW5V/E.REC 5V
RF C
H.AMP SW 5V
HEAD SW
TRACKING ENV
ENV. SELECT
CURR EMPH
TO HEAD AMP P501 (Page: 4-24/E-1): NV-SD30EO/EV (Page: 4-27/D-1): NV-SD30EO
P3001 (NV-SD30EO/EV ONLY)
TRACKING ENV.
PP3003-6 REC 0.5Vp-p (20μsec. div)
PP3003-4 PLAY 0.4Vp-p (5msec. div)
PP3002-8 REC 5.0Vp-p (20msec. div)
PP3002-7 PLAY 0.3Vp-p (1msec. div)
PP3001-6 REC 0.1Vp-p (20μsec. div)
PP3001-5 REC/PLAY 5.0Vp-p (20μsec. div)
PP3001-4 REC/PLAY 2.0Vp-p (10msec. div)
PP3001-1 REC/PLAY 2.2Vp-p (20μsec. div) PP3001-3 REC 1.0Vp-p (20μsec. div)
TO PS303 (Page: 4-17/E-1): NV-SD30EO/EV, SD40EO/EV (Page: 4-21/A-1): NV-SD30EO, SD40EO
PP3003
TO PS302 (Page: 4-17/F-1): NV-SD30EO/EV, SD40EO/EV (Page: 4-21/D-1): NV-SD30EO, SD40EO
PP3002
SP/LP
E. REC 5V
ART V/H/N
NTSC
TO PS301 (Page: 4-17/G-1): NV-SD30EO/EV, SD40EO/EV (Page: 4-21/G-1): NV-SD30EO, SD40EO
PP3001
V. NON SW 5V
VSS
VIDEO IN
VIDEO OUT
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03975K, VEP03A01CPE: NV-SD30EO) (VEP03975K: NV-SD30EV) (VEP03975J, VEP03A01FPE: NV-SD40EO) (VEP03975J: NV-SD40EV)
Q4002 2SB1378 (FULL ERASE: ON)
Q4004 2SD1991 (OSC)
QR4002 MRN1404 (FULL ERASE Ⓗ: ON)
Q4001 MSD602 (OSC)
T4002 EIQ7QF012Q
T4001
18K: NV-SD30EO/EV 15K: NV-SD40EO/EV
EIQ7QF014Q: NV-SD30EO/EV EIQ7QF013Q: NV-SD40EO/EV
0.015: NV-SD30EO/EV 0.01: NV-SD40EO/EV
3300P: NV-SD30EO/EV 2200P: NV-SD40EO/EV
BIAS
VR4002 200KB
QR4001 MRN1404 (D.A REC Ⓗ: ON)
IC4001 XRA7766AS
REC CTL
JUMPER: NV-SD30EO/EV L4004, R4031: NV-SD40EO/EV
Q4005 MSD601 (PAL LP Ⓗ: ON)
QR4004 DTC363EK (PAL LP: ON)
Q3007 MSB710 (D REC: ON)
QR3009 MRN1404 (D.REC Ⓗ: ON)
Q3006 MSB710 (E. REC: ON)
QR3005 MRN2402 (V. EE Ⓛ: ON)
QR3008 DTC363EK (SP: ON)
QR3007 DTC363EK (LP Ⓗ: ON)
SP PB Q
LP PB Q
Q3003 MSC2295 (BUFFER)
Q3002 MSD601 (AMP)
Q3001 MSB709 (BUFFER)
QR4001-C REC 20Vp-p (5μsec. div)
A-LINE
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

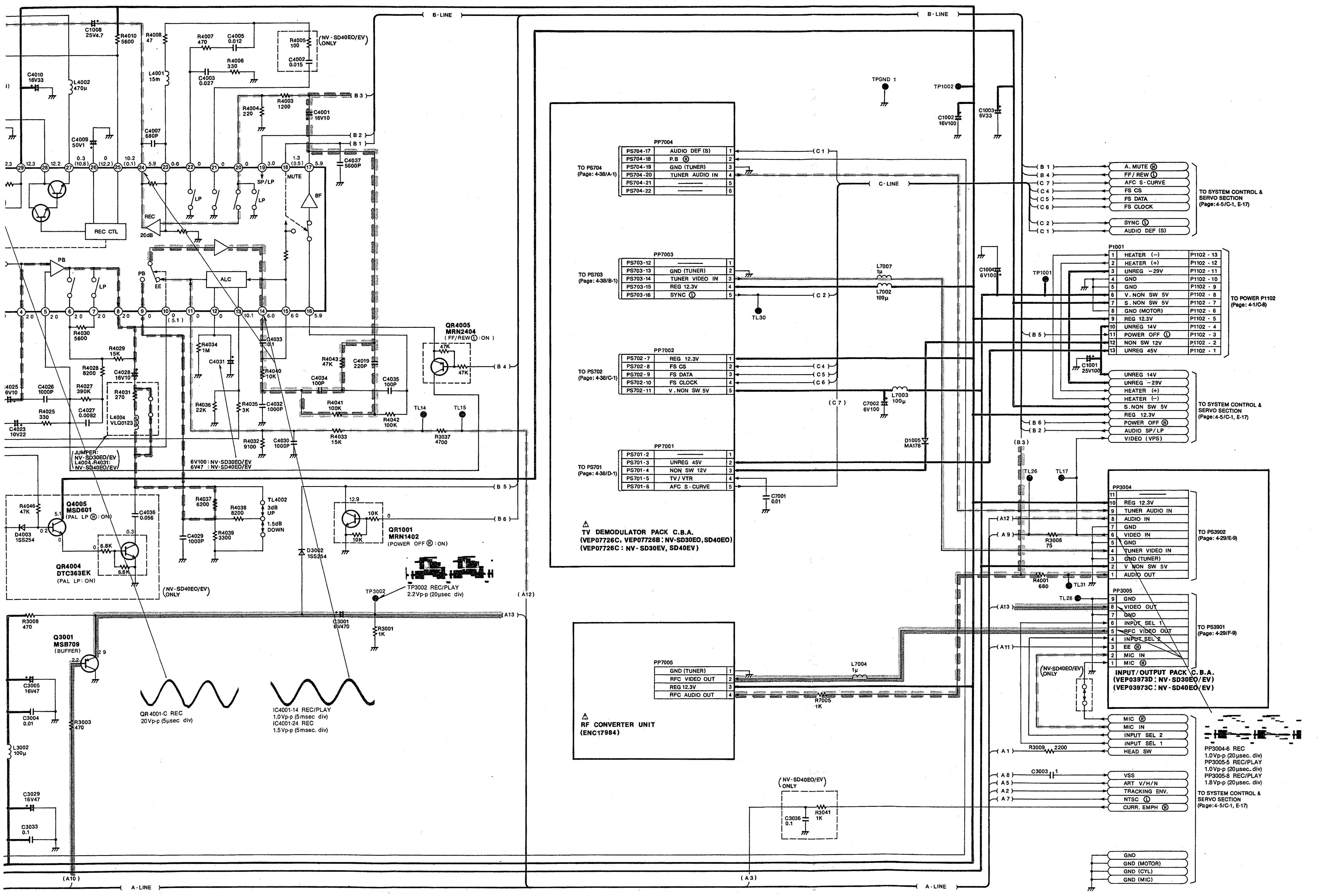
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE B
WITH PAL COLOUR SIGNAL. (SP MODE)

VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

AUDIO MAIN SIGNAL PATH IN REC MODE

AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE


B-LINE
C-LINE
A-LINE
TV DEMODULATOR PACK C.B.A.
(VEP07726C, VEP07726B : NV-SD30EO, SD40EO)
(VEP07726C : NV-SD30EV, SD40EV)
RF CONVERTER UNIT
(ENC17984)
INPUT/OUTPUT PACK C.B.A.
(VEP03973D : NV-SD30EO/EV)
(VEP03973C : NV-SD40EO/EV)
PP7004
PP7003
PP7002
PP7001
PP7005
PP3004
PP3005
P1001
TO PS704 (Page: 4-38/A-1)
TO PS703 (Page: 4-38/B-1)
TO PS702 (Page: 4-38/C-1)
TO PS701 (Page: 4-38/D-1)
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-5/C-1, E-17)
TO POWER P1102 (Page: 4-1/C-8)
TO PS3902 (Page: 4-29/E-9)
TO PS3901 (Page: 4-29/F-9)
QR4005 MRN2404 (FF/REW Ⓛ : ON)
QR1001 MRN1402 (POWER OFF Ⓗ : ON)
Q4005 MSD601 (PAL LP Ⓗ : ON)
QR4004 DTC363EK (PAL LP : ON)
Q3001 MSB709 (BUFFER)
REC CTL
ALC
MUTE
BF
TP3002 REC/PLAY 2.2Vp-p (20μsec div)
QR4001-C REC 20Vp-p (5μsec div)
IC4001-14 REC/PLAY 1.0Vp-p (5msec div)
IC4001-24 REC 1.5Vp-p (5msec div)
PP3004-6 REC 1.0Vp-p (20μsec. div)
PP3005-5 REC/PLAY 1.0Vp-p (20μsec. div)
PP3005-8 REC/PLAY 1.8Vp-p (20μsec. div)
(NV-SD40EO/EV) ONLY
JUMPER: NV-SD30EO/EV L4004, R4031: NV-SD40EO/EV
6V100 : NV-SD30EO/EV 6V47 : NV-SD40EO/EV
A. MUTE Ⓗ
FF/REW Ⓛ
AFC S-CURVE
FS CS
FS DATA
FS CLOCK
SYNC Ⓛ
AUDIO DEF (S)
HEATER (−)
HEATER (+)
UNREG −29V
GND
V. NON SW 5V
S. NON SW 5V
GND (MOTOR)
REG 12.3V
UNREG 14V
POWER OFF Ⓛ
NON SW 12V
UNREG 45V
POWER OFF Ⓗ
AUDIO SP/LP
VIDEO (VPS)
MIC Ⓗ
MIC IN
INPUT SEL 2
INPUT SEL 1
HEAD SW
VSS
ART V/H/N
TRACKING ENV.
NTSC Ⓛ
CURR. EMPH Ⓗ
GND (CYL)
GND (MIC)
TPGND 1
TP1002
TP1001
TL30
TL14
TL15
TL17
TL26
TL28
TL31
TL4002 3dB UP 1.5dB DOWN

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

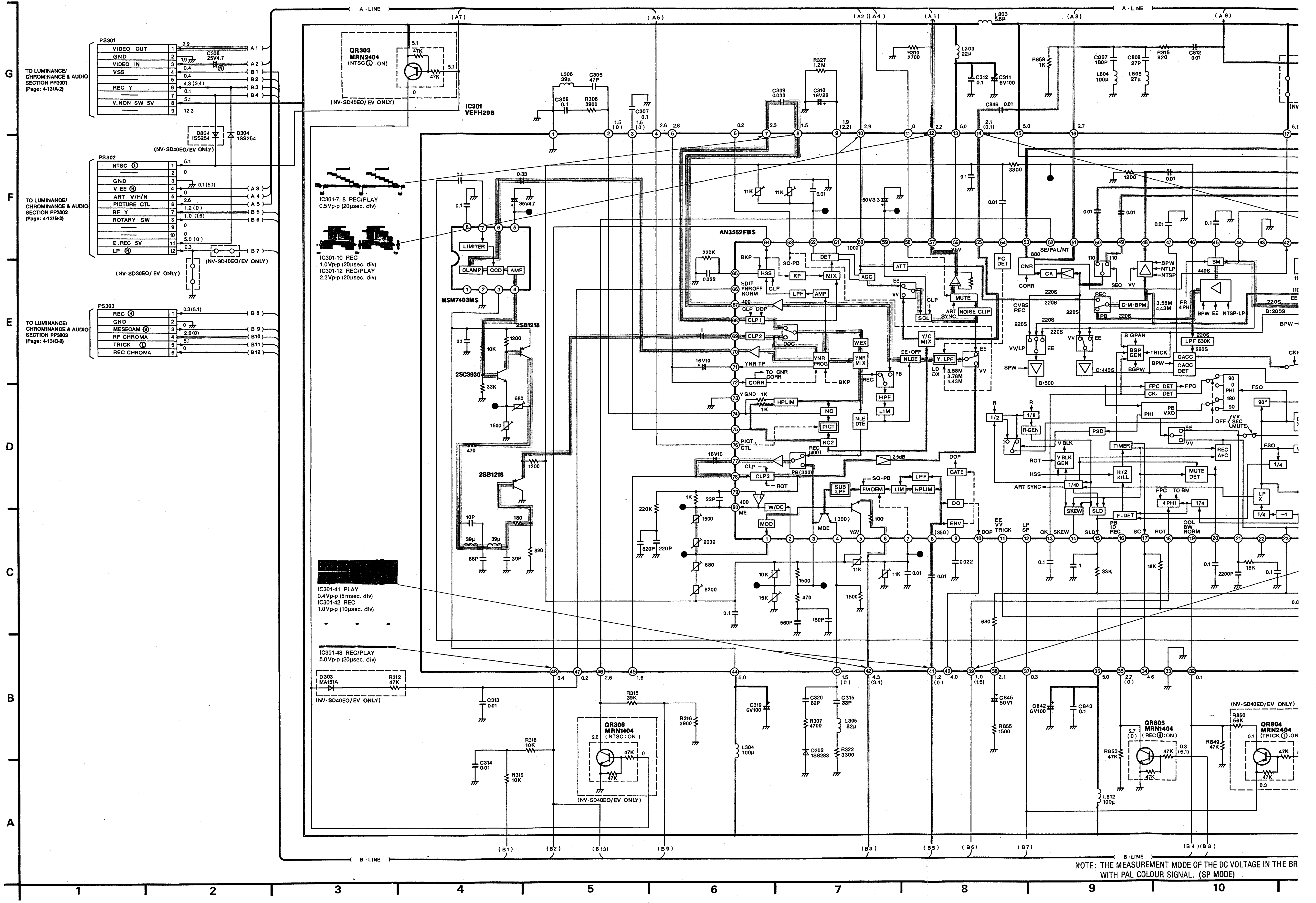
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

• LINE IN SIGNAL LEVEL... −10dB 1kHz

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9 10 11 12 13 14 15 16 17 18 19

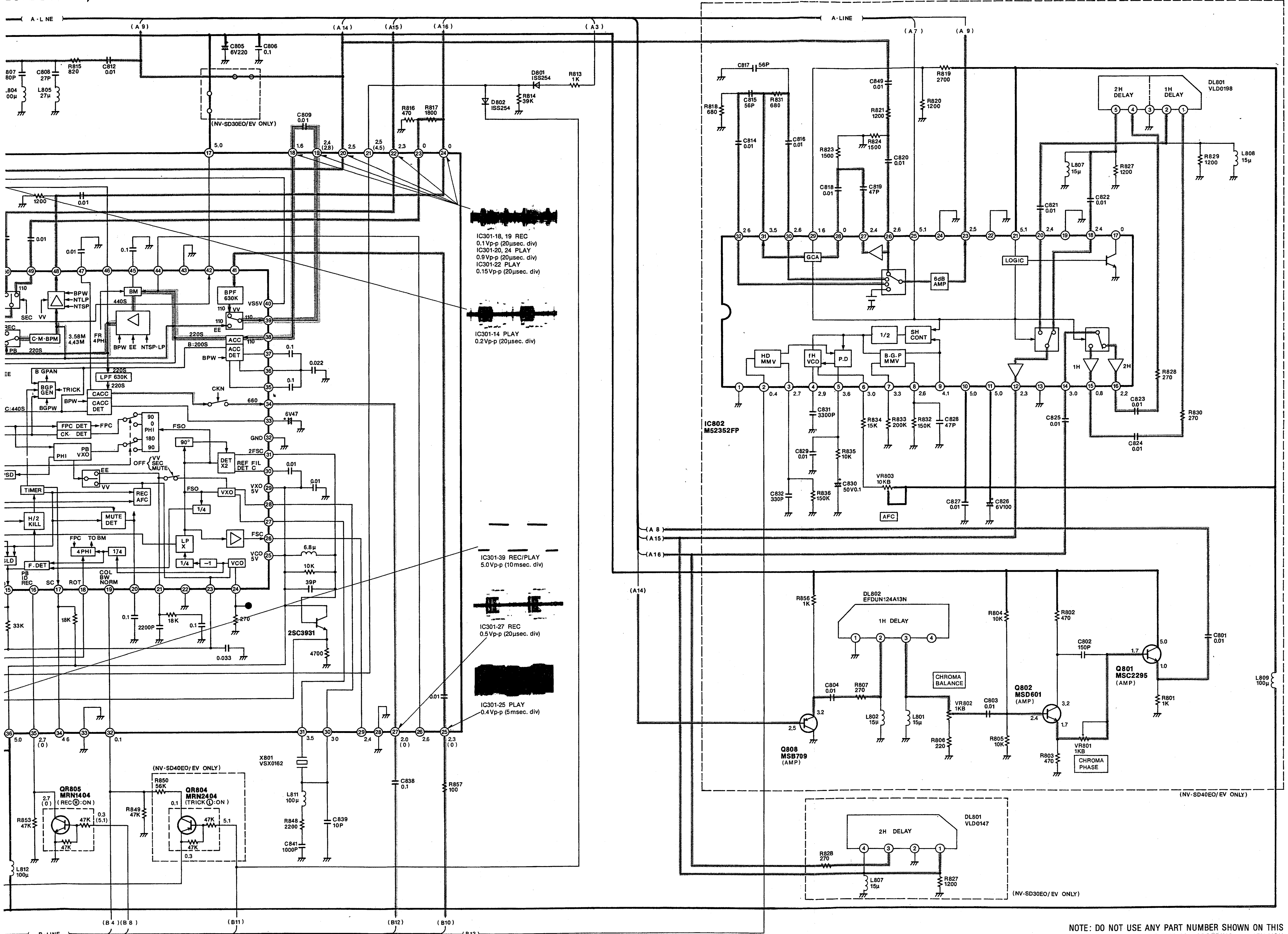
4-5. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM (VEP03975K: NV-SD30EO/EV) (VEP03975J: NV-SD40EO/EV)


A-LINE
B-LINE
PS301
VIDEO OUT
GND
VIDEO IN
VSS
REC Y
V.NON SW 5V
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3001 (Page: 4-13/A-2)
PS302
NTSC Ⓛ
GND
V.EE Ⓗ
ART V/H/N
PICTURE CTL
RF Y
ROTARY SW
E.REC 5V
LP Ⓗ
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3002 (Page: 4-13/B-2)
PS303
REC Ⓗ
GND
MESECAM Ⓗ
RF CHROMA
TRICK Ⓛ
REC CHROMA
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3003 (Page: 4-13/C-2)
D804 1SS254
D304 1SS254
(NV-SD40EO/EV ONLY)
(NV-SD30EO/EV ONLY)
QR303 MRN2404 (NTSC Ⓛ: ON)
(NV-SD40EO/EV ONLY)
IC301 VEFH29B
IC301-7, 8 REC/PLAY 0.5Vp-p (20μsec. div)
IC301-10 REC 1.0Vp-p (20μsec. div)
IC301-12 REC/PLAY 2.2Vp-p (20μsec. div)
MSM7403MS
LIMITER
CLAMP
CCD
AMP
2SB1218
2SC3930
AN3552FBS
IC301-41 PLAY 0.4Vp-p (5msec. div)
IC301-42 REC 1.0Vp-p (10μsec. div)
IC301-48 REC/PLAY 5.0Vp-p (20μsec. div)
D303 MA151A
R312 47K
QR306 MRN1404 (NTSC: ON)
(NV-SD40EO/EV ONLY)
QR805 MRN1404 (REC Ⓗ: ON)
QR804 MRN2404 (TRICK Ⓛ: ON)
L803 5.6μ
HSS
KP
MIX
DET
ATT
AGC
LPF
AMP
CLP DOP
CLP1
CLP2
CLP3
YNR TP
YNR PROG
CORR
HPLIM
NC
PICT
NC2
W.EX
YNR MIX
NLDE
Y. LPF
Y/C MIX
SCL
MUTE
NOISE CLIP
HPF
LIM
NLE DTE
FC DET
CNR
CK
C·M·BPM
BGP GEN
LPF 630K
CACC
CACC DET
FPC DET
CK·DET
PHI VXO
REC AFC
MUTE DET
H/2 KILL
1/40
SKEW
SLD
F.DET
TIMER
PSD
R-GEN
1/2
1/8
V BLK GEN
4PHI
174
FM DEM
SUB LPF
LIM
HPLIM
DO
ENV
GATE
MOD
W/DC
2.5dB
BM
BPW EE NTSP·LP
1 2 3 4 5 6 7 8 9 10
A B C D E F G

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BR
WITH PAL COLOUR SIGNAL. (SP MODE)

10EO/EV)

—— MAIN SIGNAL PATH IN REC MODE —— MAIN SIGNAL PATH IN PLAYBACK MODE


A-LINE
(A9) (A14) (A15) (A16) (A3) (A7) (A9)
C805 6V220
C806 0.1
R815 820
C812 0.01
C808 27P
L805 27μ
(NV-SD30EO/EV ONLY)
C809 0.01
D801 ISS254
R813 1K
D802 ISS254
R814 39K
R816 470
R817 1800
IC301-18, 19 REC
0.1Vp-p (20μsec. div)
IC301-20, 24 PLAY
0.9Vp-p (20μsec. div)
IC301-22 PLAY
0.15Vp-p (20μsec. div)
IC301-14 PLAY
0.2Vp-p (20μsec. div)
IC301-39 REC/PLAY
5.0Vp-p (10msec. div)
IC301-27 REC
0.5Vp-p (20μsec. div)
IC301-25 PLAY
0.4Vp-p (5msec. div)
BM
BPF 630K
VS5V
ACC
ACC DET
LPF 630K
CACC
CACC DET
BGP GEN
B GPAN
TRICK
BPW
NTLP
NTSP
C-M-BPM
3.58M 4.43M
FR 4PH
BPW EE NTSP-LP
440S
220S
B:200S
CKN
FPC DET
CK DET
PHI
PB VXO
FPC
FSO
90°
DET X2
REF FIL DET C
2FSC
GND
6V47
EE
VV
OFF
SEC MUTE
TIMER
REC AFC
VXO 5V
VXO
1/4
MUTE DET
H/2 KILL
FSC
LP X
VCO
VCO 5V
F.DET
4PHI
174
-1
PB ID REC
SC
ROT
COL BW NORM
6.8μ
10K
39P
2SC3931
4700
33K
18K
2200P
270
0.033
X801 VSX0162
L811 100μ
R848 2200
C841 1000P
C839 10P
C838 0.1
R857 100
(NV-SD40EO/EV ONLY)
R850 56K
QR804 MRN2404 (TRICK Ⓛ:ON)
QR805 MRN1404 (REC Ⓗ:ON)
R853 47K
R849 47K
47K
L812 100μ
(B4) (B8) (B11) (B12) (B10) (B13)
B-LINE
C817 56P
C815 56P
R831 680
R818 680
C814 0.01
C816 0.01
C849 0.01
R819 2700
R820 1200
R821 1200
R823 1500
R824 1500
C820 0.01
C818 0.01
C819 47P
GCA
6dB AMP
LOGIC
1/2
SH CONT
HD MMV
fH VCO
P.D
B.G.P MMV
AFC
DL801 VLD0198
2H DELAY
1H DELAY
R829 1200
L808 15μ
L807 15μ
R827 1200
C822 0.01
C821 0.01
R828 270
C823 0.01
R830 270
C824 0.01
C825 0.01
1H 2H
IC802 M52352FP
C831 3300P
R834 15K
R833 200K
R832 150K
C828 47P
C829 0.01
R835 10K
VR803 10KB
C830 50V0.1
C832 330P
R836 150K
C827 0.01
C826 6V100
(A8) (A15) (A16) (A14)
R856 1K
DL802 EFDUN124A13N
1H DELAY
R804 10K
R802 470
C801 0.01
C802 150P
Q801 MSC2295 (AMP)
R801 1K
L809 100μ
CHROMA BALANCE
C804 0.01
R807 270
L802 15μ
L801 15μ
VR802 1KB
C803 0.01
Q802 MSD601 (AMP)
Q808 MSB709 (AMP)
R806 220
R805 10K
R803 470
VR801 1KB
CHROMA PHASE
(NV-SD40EO/EV ONLY)
DL801 VLD0147
2H DELAY
R828 270
L807 15μ
R827 1200
(NV-SD30EO/EV ONLY)

E: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

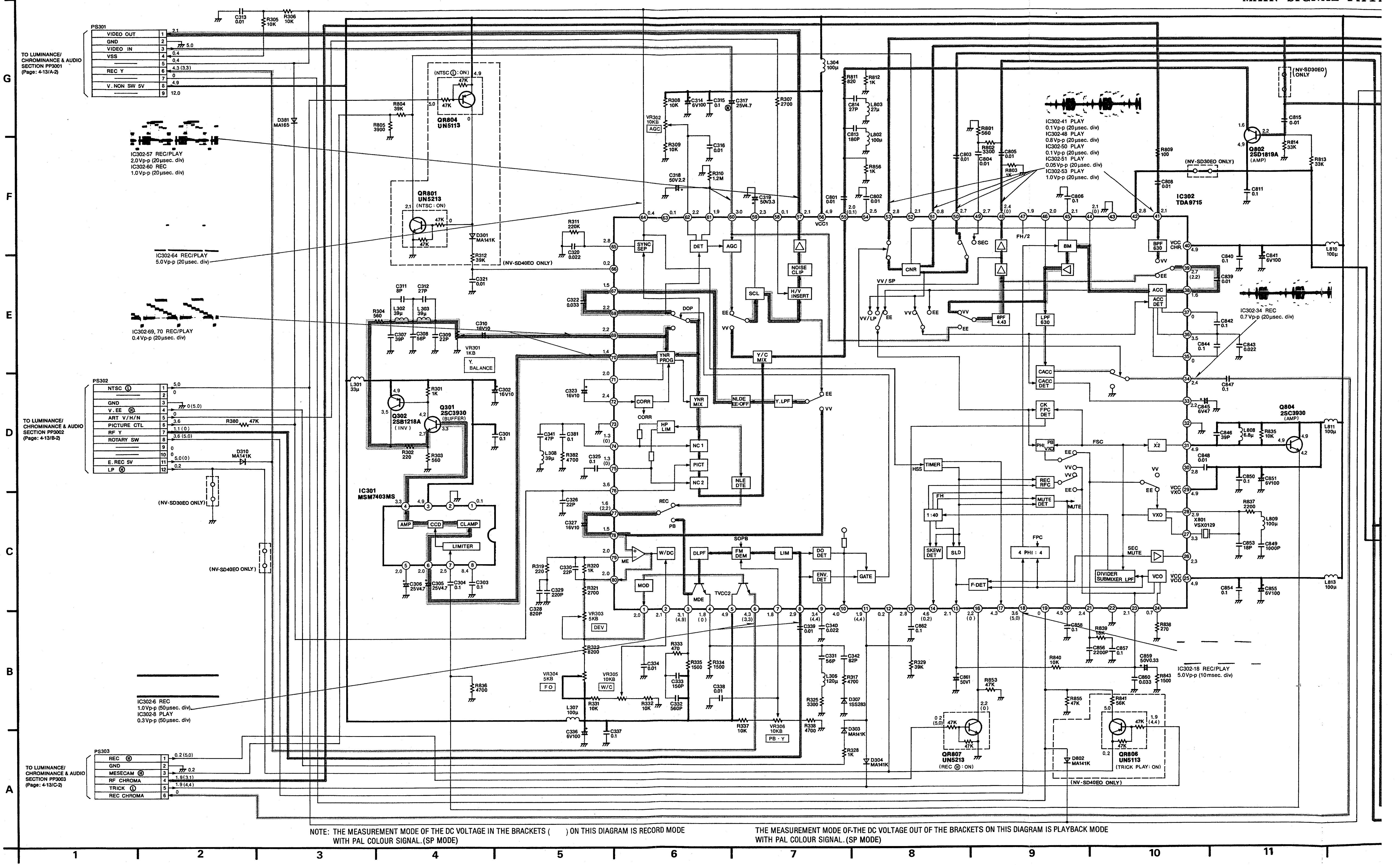
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9 10 11 12 13 14 15 16 17 18

4-6. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM (VEP03A01CPE: NV-SD30EO) (VEP03A01FPE: NV-SD40EO)

MAIN SIGNAL PAT


PS301
VIDEO OUT
GND
VIDEO IN
VSS
REC Y
V. NON SW 5V
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3001 (Page: 4-13/A-2)
PS302
NTSC
GND
V. EE
ART V/H/N
PICTURE CTL
RF Y
ROTARY SW
E. REC 5V
LP
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3002 (Page: 4-13/B-2)
PS303
REC
GND
MESECAM
RF CHROMA
TRICK
REC CHROMA
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3003 (Page: 4-13/C-2)
IC302-57 REC/PLAY 2.0Vp-p (20μsec. div) IC302-60 REC 1.0Vp-p (20μsec. div)
IC302-64 REC/PLAY 5.0Vp-p (20μsec. div)
IC302-69, 70 REC/PLAY 0.4Vp-p (20μsec. div)
IC302-6 REC 1.0Vp-p (50μsec. div) IC302-8 PLAY 0.3Vp-p (50μsec. div)
IC302-41 PLAY 0.1Vp-p (20μsec. div) IC302-48 PLAY 0.8Vp-p (20μsec. div) IC302-50 PLAY 0.1Vp-p (20μsec. div) IC302-51 PLAY 0.05Vp-p (20μsec. div) IC302-53 PLAY 1.0Vp-p (20μsec. div)
IC302-34 REC 0.7Vp-p (20μsec. div)
IC302-18 REC/PLAY 5.0Vp-p (10msec. div)
QR804 UN5113
QR801 UN5213
IC301 MSM7403MS
Q301 2SC3930 (BUFFER)
Q302 2SB1218A (INV)
IC302 TDA9715
Q802 2SD1819A (AMP)
Q804 2SC3930 (AMP)
QR807 UN5213 (REC : ON)
QR806 UN5113 (TRICK PLAY: ON)
(NV-SD30EO ONLY)
(NV-SD40EO ONLY)
SYNC SEP
DET
AGC
NOISE CLIP
SCL
H/V INSERT
DOP
YNR PROG
Y/C MIX
CORR
HP LIM
NC 1
PICT
NC 2
YNR MIX
NLDE EE:OFF
Y. LPF
NLE DTE
ME
W/DC
DLPF
FM DEM
LIM
DO DET
ENV. DET
GATE
MOD
MDE
TVCC2
SOPB
CNR
BM
ACC
ACC DET
BPF 630
BPF 4.43
LPF 630
CACC
CACC DET
CK FPC DET
PHI PB VXO
X2
TIMER
HSS
REC RFC
MUTE DET
1:40
SKEW DET
SLD
4 PHI : 4
FPC
F-DET
DIVIDER SUBMIXER LPF
VCO
VXO
SEC MUTE
AMP
CCD
CLAMP
LIMITER
Y. BALANCE
DEV
FO
W/C
PB · Y
X801 VSX0129
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G

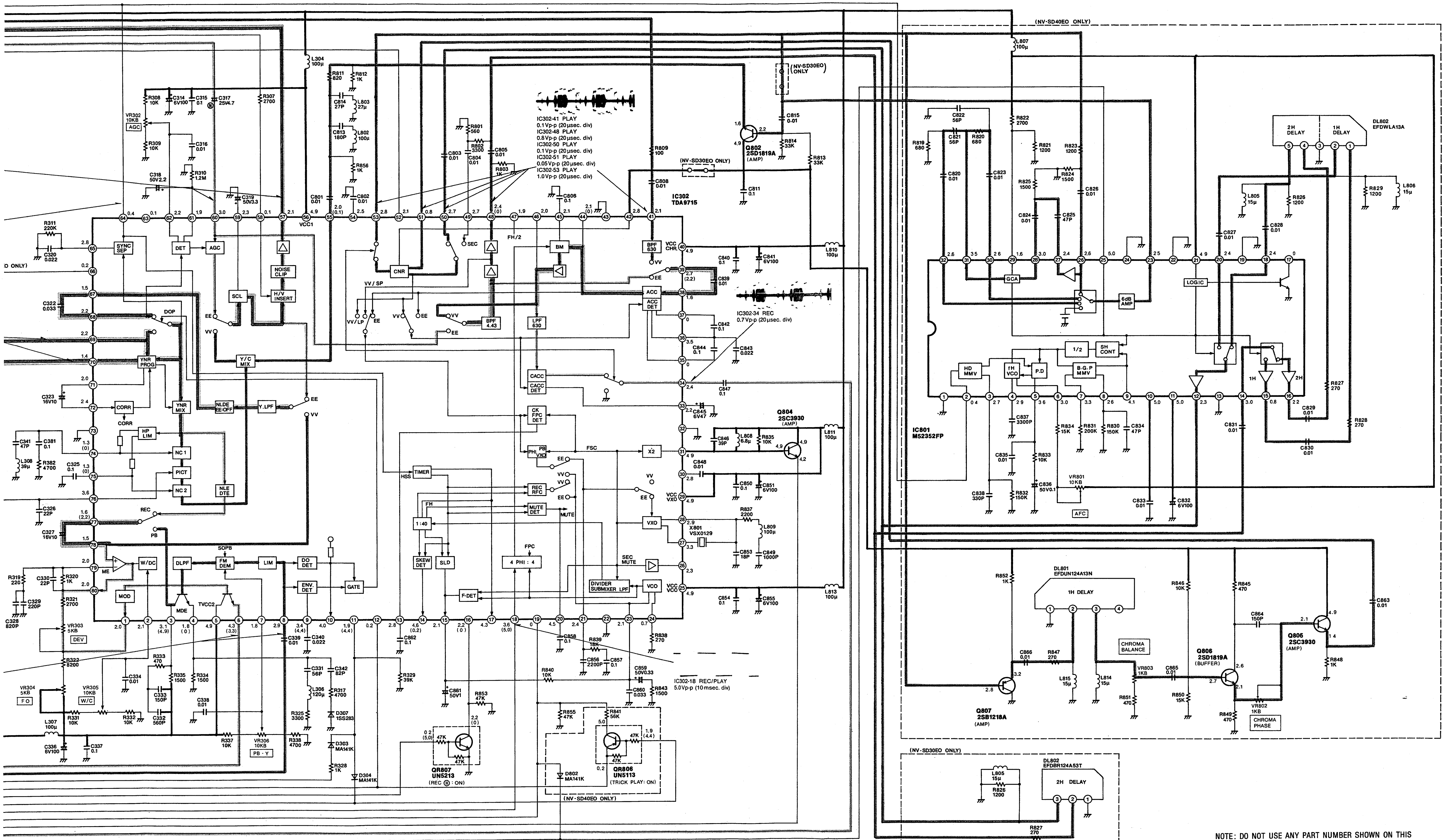
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

IAGRAM (VEP03A01CPE: NV-SD30EO) (VEP03A01FPE: NV-SD40EO)

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE


IC302 TDA9715
IC801 M52352FP
Q802 2SD1819A (AMP)
Q804 2SC3930 (AMP)
Q805 2SC3930 (AMP)
Q806 2SD1819A (BUFFER)
Q807 2SB1218A (AMP)
QR807 UN5213 (REC Ⓡ · ON)
QR806 UN5113 (TRICK PLAY: ON)
DL801 EFDUN124A13N 1H DELAY
DL802 EFDWLA13A 2H DELAY 1H DELAY
DL802 EFDBR124A53T 2H DELAY
X801 VSX0129
(NV-SD40EO ONLY)
(NV-SD30EO ONLY)
IC302-41 PLAY 0.1Vp-p (20μsec. div)
IC302-48 PLAY 0.8Vp-p (20μsec. div)
IC302-50 PLAY 0.1Vp-p (20μsec. div)
IC302-51 PLAY 0.05Vp-p (20μsec. div)
IC302-53 PLAY 1.0Vp-p (20μsec. div)
IC302-34 REC 0.7Vp-p (20μsec. div)
IC302-18 REC/PLAY 5.0Vp-p (10msec. div)
SYNC SEP
DET
AGC
NOISE CLIP
H/V INSERT
SCL
DOP
YNR PROG
Y/C MIX
YNR MIX
NLDE EE-OFF
Y.LPF
CORR
HP LIM
NC 1
PICT
NC 2
NLE DTE
W/DC
DLPF
FM DEM
LIM
DO DET
ENV. DET
GATE
MOD
MDE
TVCC2
SOPB
CNR
BPF 4.43
BM
LPF 630
ACC
ACC DET
BPF 630
CACC
CACC DET
CK FPC DET
PHI PB VXO
X2
TIMER
HSS
REC RFC
MUTE DET
1:40
SKEW DET
SLD
4 PHI : 4
FPC
F-DET
DIVIDER SUBMIXER LPF
VCO
VXO
SEC MUTE
GCA
6dB AMP
LOGIC
1/2
SH CONT
HD MMV
fH VCO
P.D
B.G.P MMV
AFC
CHROMA BALANCE
CHROMA PHASE
VR302 10KB AGC
VR303 5KB DEV
VR304 5KB FO
VR305 10KB W/C
VR306 10KB PB-Y
VR801 10KB
VR802 1KB
VR803 1KB

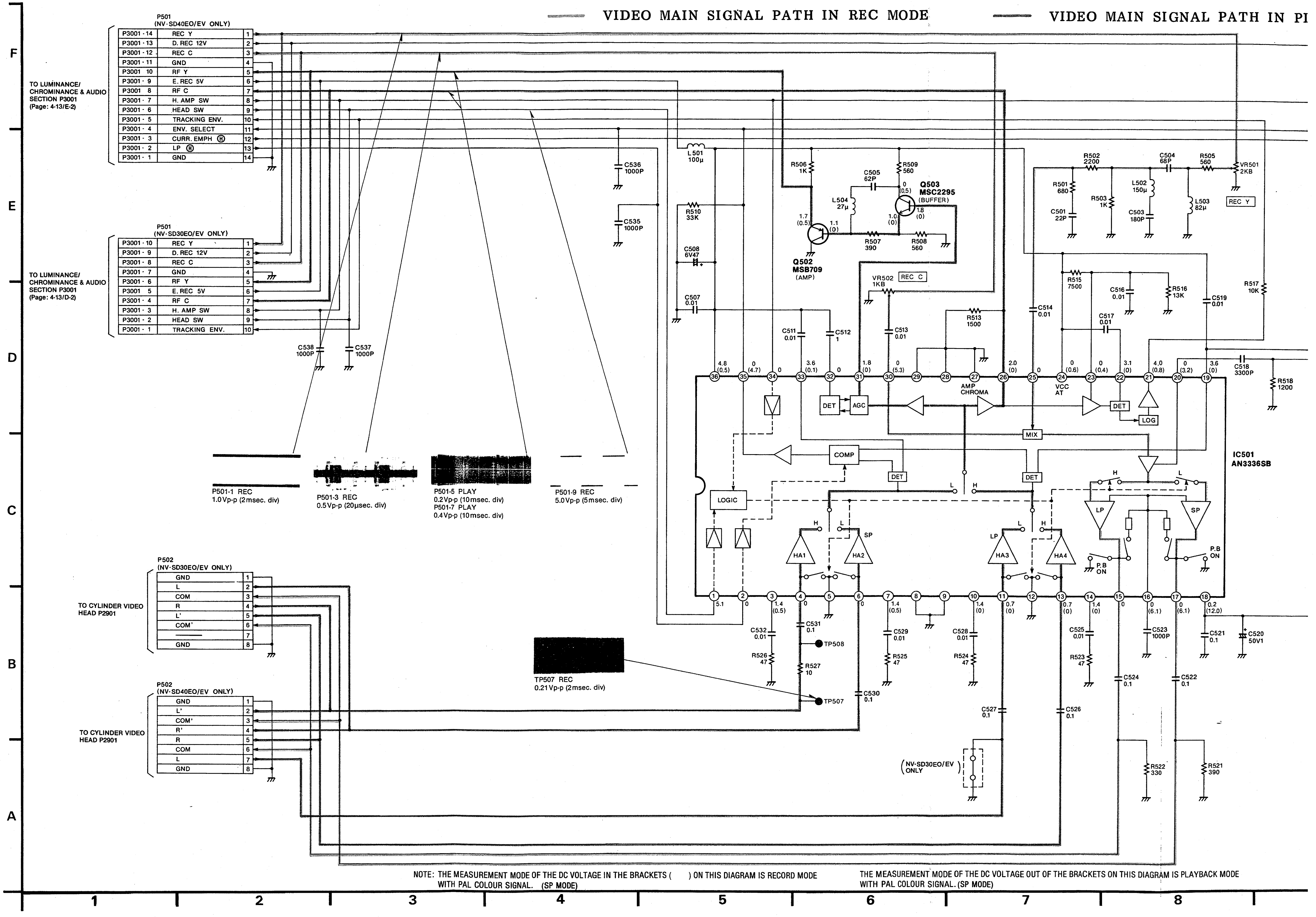
KETS (   ) ON THIS DIAGRAM IS RECORD MODE

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE
WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

5 6 7 8 9 10 11 12 13 14 15 16

4-7. HEAD AMP SCHEMATIC DIAGRAM (VEP05180B: NV-SD30EO/EV) (VEP05180A: NV-SD40EO/EV)


VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PI
P501 (NV-SD40EO/EV ONLY)
P3001-14 REC Y 1
P3001-13 D. REC 12V 2
P3001-12 REC C 3
P3001-11 GND 4
P3001-10 RF Y 5
P3001-9 E. REC 5V 6
P3001-8 RF C 7
P3001-7 H. AMP SW 8
P3001-6 HEAD SW 9
P3001-5 TRACKING ENV. 10
P3001-4 ENV. SELECT 11
P3001-3 CURR. EMPH Ⓗ 12
P3001-2 LP Ⓗ 13
P3001-1 GND 14
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION P3001 (Page: 4-13/E-2)
P501 (NV-SD30EO/EV ONLY)
P3001-10 REC Y 1
P3001-9 D. REC 12V 2
P3001-8 REC C 3
P3001-7 GND 4
P3001-6 RF Y 5
P3001-5 E. REC 5V 6
P3001-4 RF C 7
P3001-3 H. AMP SW 8
P3001-2 HEAD SW 9
P3001-1 TRACKING ENV. 10
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION P3001 (Page: 4-13/D-2)
C538 1000P
C537 1000P
C536 1000P
C535 1000P
P501-1 REC 1.0Vp-p (2msec. div)
P501-3 REC 0.5Vp-p (20μsec. div)
P501-5 PLAY 0.2Vp-p (10msec. div)
P501-7 PLAY 0.4Vp-p (10msec. div)
P501-9 REC 5.0Vp-p (5msec. div)
P502 (NV-SD30EO/EV ONLY)
GND 1
L 2
COM 3
R 4
L' 5
COM' 6
7
GND 8
TO CYLINDER VIDEO HEAD P2901
P502 (NV-SD40EO/EV ONLY)
GND 1
L' 2
COM' 3
R' 4
R 5
COM 6
L 7
GND 8
TO CYLINDER VIDEO HEAD P2901
TP507 REC 0.21Vp-p (2msec. div)
TP507
TP508
L501 100μ
R510 33K
C508 6V47
C507 0.01
R506 1K
Q502 MSB709 (AMP)
L504 27μ
C505 62P
R509 560
Q503 MSC2295 (BUFFER)
R507 390
R508 560
VR502 1KB
REC C
C511 0.01
C512 1
C513 0.01
R513 1500
C514 0.01
R515 7500
C516 0.01
C517 0.01
R516 13K
C519 0.01
R517 10K
R502 2200
C504 68P
R505 560
VR501 2KB
R501 680
C501 22P
R503 1K
L502 150μ
C503 180P
L503 82μ
REC Y
C518 3300P
R518 1200
DET
AGC
AMP CHROMA
VCC AT
LOG
MIX
COMP
LOGIC
HA1
HA2
HA3
HA4
LP
SP
H
L
P.B ON
IC501 AN3336SB
C532 0.01
R526 47
C531 0.1
R527 10
C530 0.1
C529 0.01
R525 47
C528 0.01
R524 47
C527 0.1
C526 0.1
C525 0.01
R523 47
C523 1000P
C524 0.1
C522 0.1
C521 0.1
C520 50V1
R522 330
R521 390
(NV-SD30EO/EV ONLY)
F
E
D
C
B
A
1
2
3
4
5
6
7
8

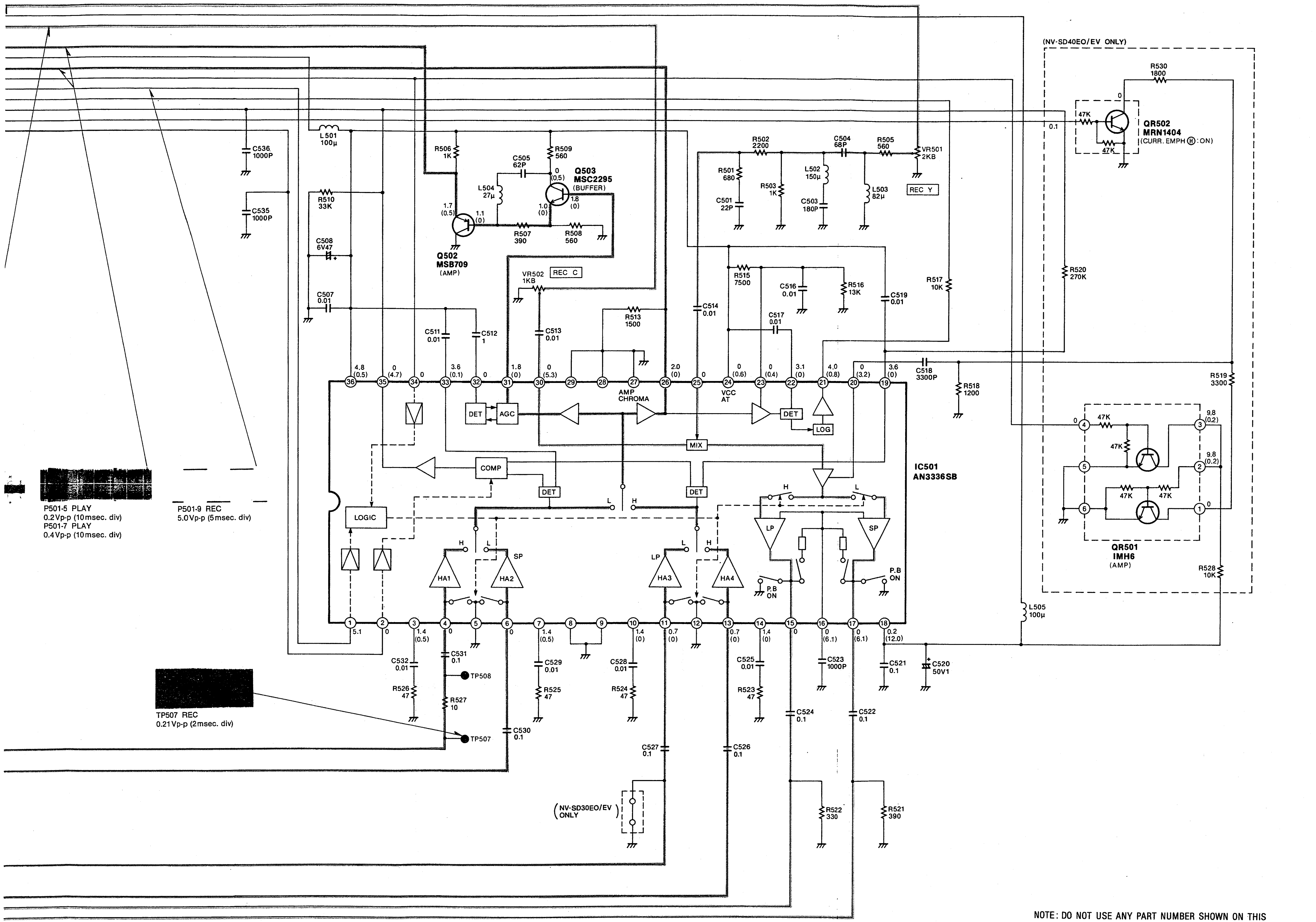
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

(VEP05180B: NV-SD30EO/EV) (VEP05180A: NV-SD40EO/EV)

VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE


(NV-SD40EO/EV ONLY)
R530 1800
QR502 MRN1404 (CURR. EMPH Ⓗ:ON)
47K
47K
0.1
C536 1000P
C535 1000P
L501 100μ
R510 33K
C508 6V47
C507 0.01
R506 1K
R509 560
C505 62P
L504 27μ
Q503 MSC2295 (BUFFER)
Q502 MSB709 (AMP)
R507 390
R508 560
VR502 1KB
REC C
C511 0.01
C512 1
C513 0.01
R513 1500
R502 2200
C504 68P
R505 560
VR501 2KB
REC Y
R501 680
C501 22P
R503 1K
L502 150μ
C503 180P
L503 82μ
R515 7500
C516 0.01
R516 13K
C517 0.01
C514 0.01
C519 0.01
R517 10K
R520 270K
C518 3300P
R518 1200
R519 3300
AMP CHROMA
VCC AT
DET
AGC
LOG
MIX
COMP
LOGIC
IC501 AN3336SB
HA1
HA2
HA3
HA4
LP
SP
H
L
P.B ON
QR501 IMH6 (AMP)
R528 10K
L505 100μ
P501-5 PLAY 0.2Vp-p (10msec. div) P501-7 PLAY 0.4Vp-p (10msec. div)
P501-9 REC 5.0Vp-p (5msec. div)
TP507 REC 0.21Vp-p (2msec. div)
C532 0.01
R526 47
C531 0.1
TP508
R527 10
TP507
C530 0.1
C529 0.01
R525 47
C528 0.01
R524 47
C527 0.1
C526 0.1
(NV-SD30EO/EV ONLY)
C525 0.01
R523 47
C523 1000P
C524 0.1
C522 0.1
C521 0.1
C520 50V1
R522 330
R521 390
4.8 (0.5)
0 (4.7)
3.6 (0.1)
1.8 (0)
0 (5.3)
2.0 (0)
0 (0.6)
0 (0.4)
3.1 (0)
4.0 (0.8)
0 (3.2)
3.6 (0)
5.1
1.4 (0.5)
0.7 (0)
1.4 (0)
0 (6.1)
0.2 (12.0)
1.7 (0.5)
1.1 (0)
1.0 (0)
1.8 (0)
0 (0.5)
9.8 (0.2)

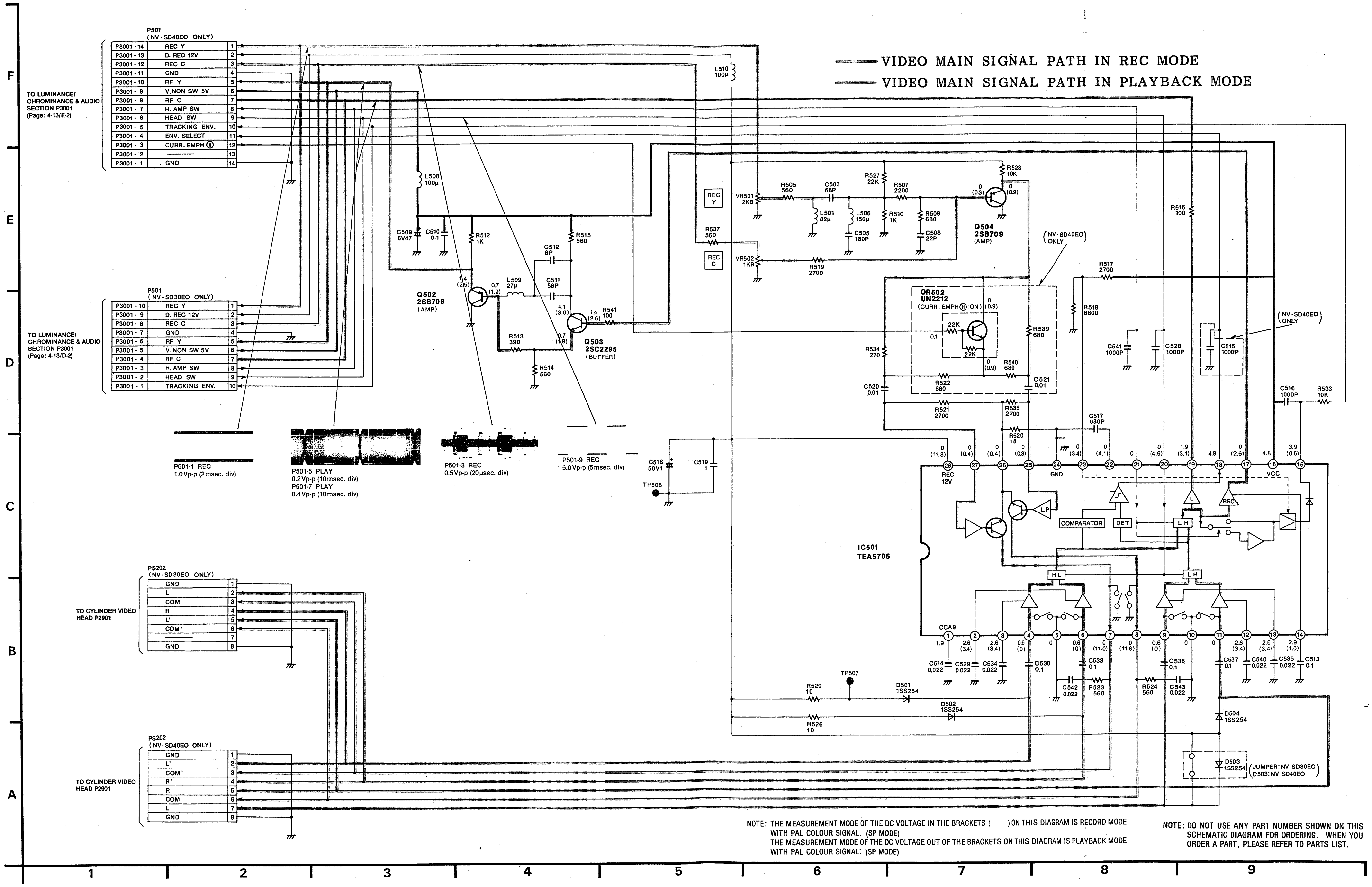
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3 4 5 6 7 8 9 10

4-8. HEAD AMP SCHEMATIC DIAGRAM (VEP05182APE: NV-SD30EO) (VEP05182BPE: NV-SD40EO)

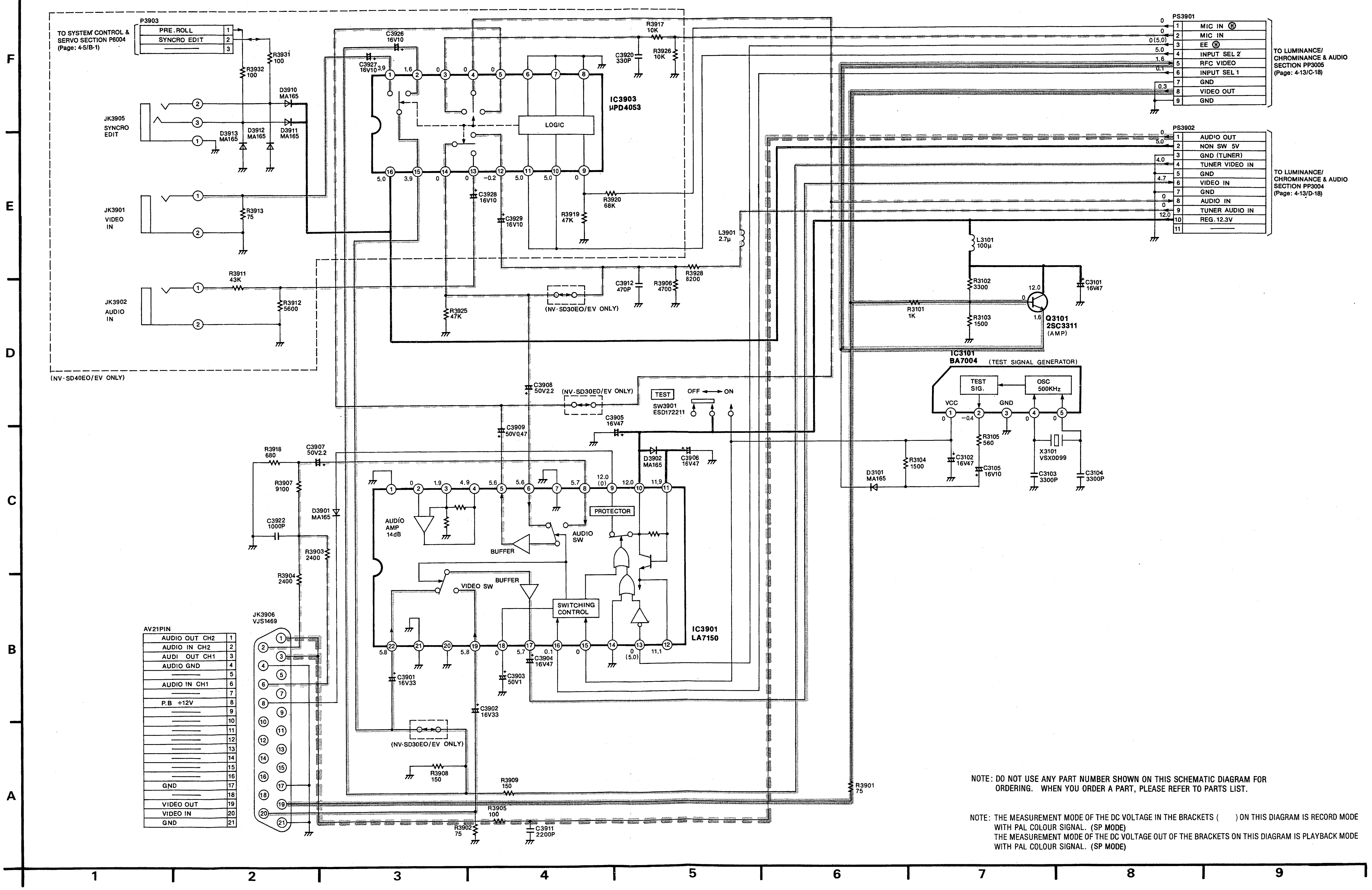

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
P501 (NV-SD40EO ONLY)
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION P3001 (Page: 4-13/E-2)
P3001-14 REC Y 1
P3001-13 D. REC 12V 2
P3001-12 REC C 3
P3001-11 GND 4
P3001-10 RF Y 5
P3001-9 V.NON SW 5V 6
P3001-8 RF C 7
P3001-7 H. AMP SW 8
P3001-6 HEAD SW 9
P3001-5 TRACKING ENV. 10
P3001-4 ENV. SELECT 11
P3001-3 CURR. EMPH Ⓗ 12
P3001-2 13
P3001-1 GND 14
P501 (NV-SD30EO ONLY)
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION P3001 (Page: 4-13/D-2)
P3001-10 REC Y 1
P3001-9 D. REC 12V 2
P3001-8 REC C 3
P3001-7 GND 4
P3001-6 RF Y 5
P3001-5 V. NON SW 5V 6
P3001-4 RF C 7
P3001-3 H. AMP SW 8
P3001-2 HEAD SW 9
P3001-1 TRACKING ENV. 10
P501-1 REC 1.0Vp-p (2msec. div)
P501-5 PLAY 0.2Vp-p (10msec. div)
P501-7 PLAY 0.4Vp-p (10msec. div)
P501-3 REC 0.5Vp-p (20μsec. div)
P501-9 REC 5.0Vp-p (5msec. div)
L508 100μ
C509 6V47
C510 0.1
R512 1K
R515 560
C512 8P
L509 27μ
C511 56P
Q502 2SB709 (AMP)
Q503 2SC2295 (BUFFER)
R513 390
R514 560
R541 100
L510 100μ
REC Y
REC C
R537 560
VR501 2KB
VR502 1KB
R505 560
C503 68P
L501 82μ
L506 150μ
C505 180P
R527 22K
R507 2200
R510 1K
R509 680
C508 22P
R519 2700
R528 10K
Q504 2SB709 (AMP)
(NV-SD40EO ONLY)
R516 100
R517 2700
R518 6800
QR502 UN2212 (CURR. EMPH Ⓗ:ON)
22K
R539 680
R534 270
R540 680
R522 680
C521 0.01
C520 0.01
R521 2700
R535 2700
R520 18
C517 680P
C541 1000P
C528 1000P
(NV-SD40EO ONLY)
C515 1000P
C516 1000P
R533 10K
C518 50V1
C519 1
TP508
REC 12V
GND
VCC
COMPARATOR
DET
LP
RGC
L H
H L
IC501 TEA5705
CCA9
C514 0.022
C529 0.022
C534 0.022
C530 0.1
C533 0.1
C542 0.022
R523 560
R524 560
C543 0.022
C536 0.1
C537 0.1
C540 0.022
C535 0.022
C513 0.1
TP507
R529 10
D501 1SS254
D502 1SS254
R526 10
D504 1SS254
D503 1SS254
(JUMPER: NV-SD30EO) (D503: NV-SD40EO)
PS202 (NV-SD30EO ONLY)
TO CYLINDER VIDEO HEAD P2901
GND 1
L 2
COM 3
R 4
L' 5
COM' 6
7
GND 8
PS202 (NV-SD40EO ONLY)
TO CYLINDER VIDEO HEAD P2901
GND 1
L' 2
COM' 3
R' 4
R 5
COM 6
L 7
GND 8
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-9. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM

▬ VIDEO MAIN SIGNAL PATH IN REC MODE
▬ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
▬ ▬ AUDIO MAIN SIGNAL PATH IN REC MODE
▬ ▬ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE


P3903
TO SYSTEM CONTROL & SERVO SECTION P6004 (Page: 4-5/B-1)
PRE.ROLL
SYNCRO EDIT
R3931 100
R3932 100
D3910 MA165
D3911 MA165
D3912 MA165
D3913 MA165
JK3905 SYNCRO EDIT
JK3901 VIDEO IN
R3913 75
JK3902 AUDIO IN
R3911 43K
R3912 5600
(NV-SD40EO/EV ONLY)
C3926 16V10
C3927 16V10
IC3903 μPD4053
LOGIC
C3928 16V10
C3929 16V10
R3917 10K
R3926 10K
C3920 330P
R3920 68K
R3919 47K
R3925 47K
C3912 470P
R3906 4700
R3928 8200
L3901 2.7μ
(NV-SD30EO/EV ONLY)
C3908 50V2.2
C3909 50V0.47
C3905 16V47
TEST
SW3901 ESD172211
OFF ON
D3902 MA165
C3906 16V47
R3918 680
C3907 50V2.2
R3907 9100
D3901 MA165
C3922 1000P
R3903 2400
R3904 2400
AUDIO AMP 14dB
BUFFER
AUDIO SW
PROTECTOR
VIDEO SW
SWITCHING CONTROL
IC3901 LA7150
C3901 16V33
C3902 16V33
C3903 50V1
C3904 16V47
R3908 150
R3909 150
R3905 100
R3902 75
C3911 2200P
R3901 75
JK3906 VJS1469
PS3901
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3005 (Page: 4-13/C-18)
PS3902
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3004 (Page: 4-13/D-18)
L3101 100μ
R3102 3300
R3103 1500
R3101 1K
Q3101 2SC3311 (AMP)
C3101 16V47
IC3101 BA7004 (TEST SIGNAL GENERATOR)
TEST SIG.
OSC 500KHz
VCC
GND
R3105 560
R3104 1500
D3101 MA165
C3102 16V47
C3105 16V10
X3101 VSX0099
C3103 3300P
C3104 3300P
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9

PS3901	
1	MIC IN Ⓗ
2	MIC IN
3	EE Ⓗ
4	INPUT SEL 2
5	RFC VIDEO
6	INPUT SEL 1
7	GND
8	VIDEO OUT
9	GND

PS3902	
1	AUDIO OUT
2	NON SW 5V
3	GND (TUNER)
4	TUNER VIDEO IN
5	GND
6	VIDEO IN
7	GND
8	AUDIO IN
9	TUNER AUDIO IN
10	REG. 12.3V
11	———

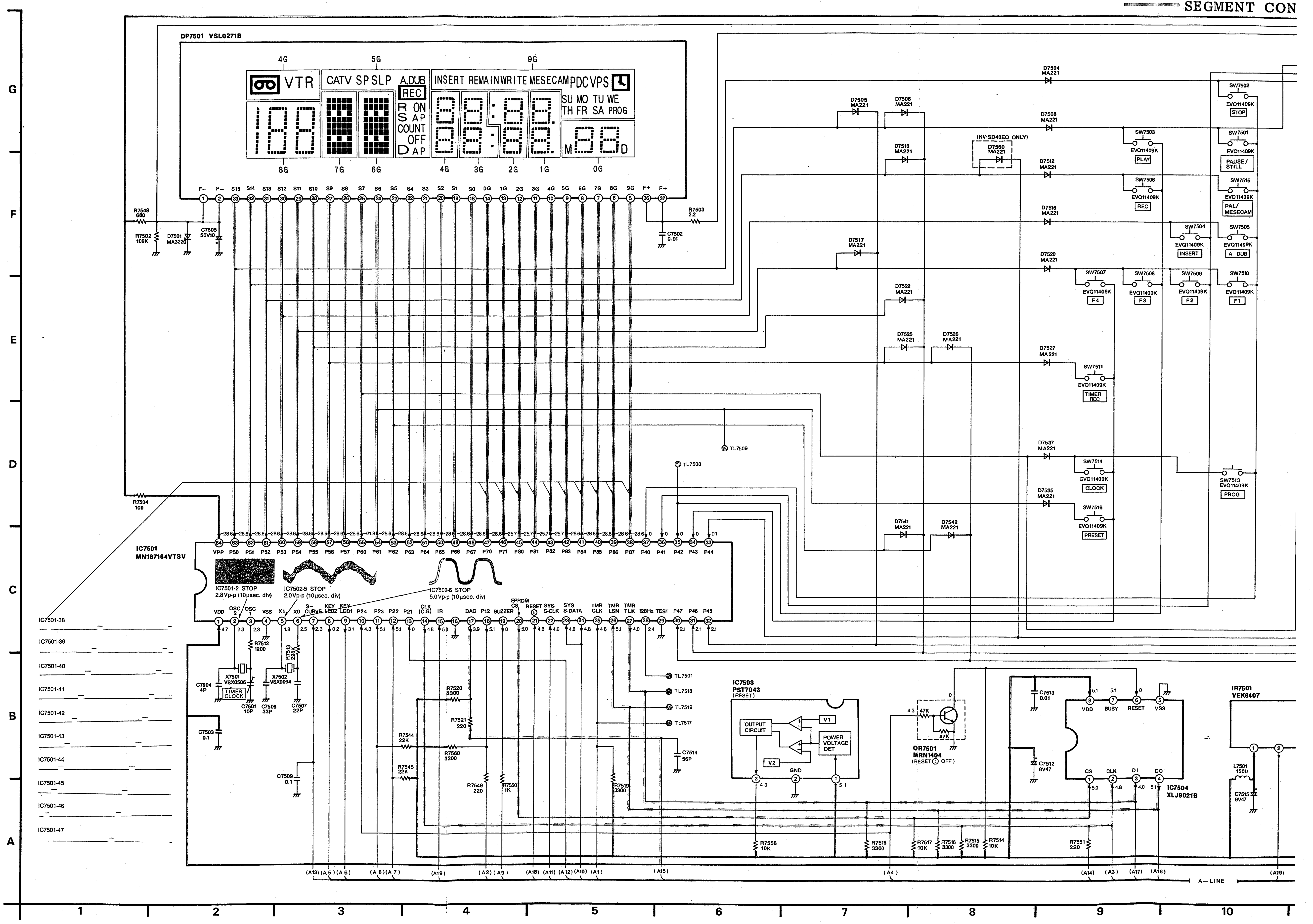
AV21PIN

AUDIO OUT CH2	1
AUDIO IN CH2	2
AUDI OUT CH1	3
AUDIO GND	4
———	5
AUDIO IN CH1	6
———	7
P.B +12V	8
———	9
———	10
———	11
———	12
———	13
———	14
———	15
———	16
GND	17
———	18
VIDEO OUT	19
VIDEO IN	20
GND	21

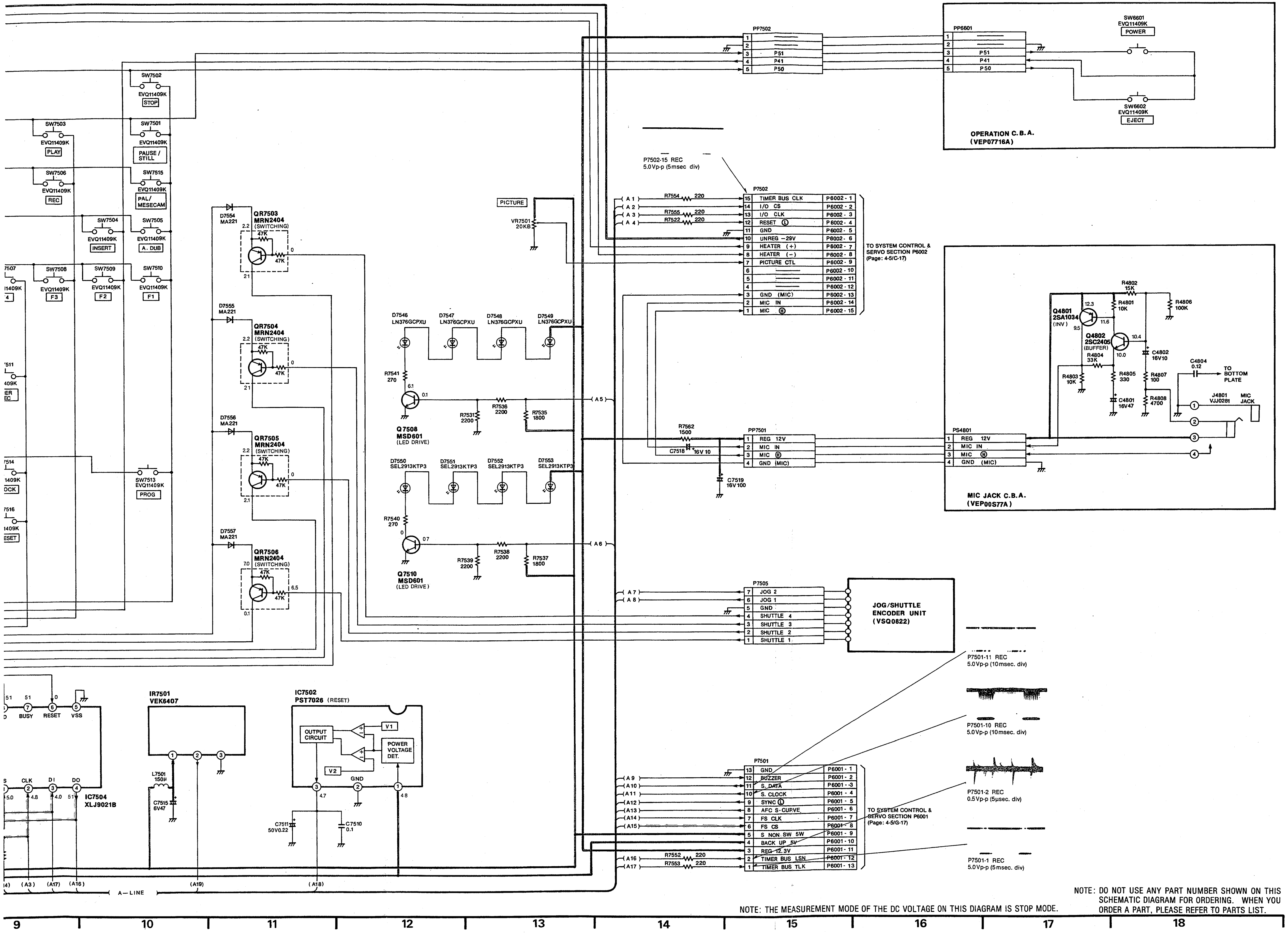
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

4-10. TIMER & OPERATION SCHEMATIC DIAGRAM (NV-SD40EO/EV)


SEGMENT CON
DP7501 VSL0271B
VTR
CATV SP SLP
A.DUB
REC
INSERT REMAIN WRITE MESECAM PDC VPS
SU MO TU WE
TH FR SA PROG
R ON
S AP
COUNT
OFF
D AP
4G 5G 9G 8G 7G 6G 4G 3G 2G 1G 0G
F- F- S15 S14 S13 S12 S11 S10 S9 S8 S7 S6 S5 S4 S3 S2 S1 S0 0G 1G 2G 3G 4G 5G 6G 7G 8G 9G F+ F+
R7548 680
R7502 100K
D7501 MA3220
C7505 50V10
R7503 2.2
C7502 0.01
R7504 100
IC7501 MN187164VTSV
VPP P50 P51 P52 P53 P54 P55 P56 P57 P60 P61 P62 P63 P64 P65 P66 P67 P70 P71 P80 P81 P82 P83 P84 P85 P86 P87 P40 P41 P42 P43 P44
VDD OSC 2 OSC 1 VSS X1 X0 S-CURVE KEY LED2 KEY LED1 P24 P23 P22 P21 CLK (C.G) IR DAC P12 BUZZER EPROM CS RESET ① SYS S-CLK SYS S-DATA TMR CLK TMR LSN TMR TLK 128Hz TEST P47 P46 P45
IC7501-2 STOP 2.8Vp-p (10μsec. div)
IC7502-5 STOP 2.0Vp-p (10μsec. div)
IC7502-6 STOP 5.0Vp-p (10μsec. div)
IC7501-38
IC7501-39
IC7501-40
IC7501-41
IC7501-42
IC7501-43
IC7501-44
IC7501-45
IC7501-46
IC7501-47
X7501 VSX0506
TIMER CLOCK
X7502 VSX0094
R7512 1200
R7513 220K
C7604 4P
C7501 10P
C7506 33P
C7507 22P
C7503 0.1
C7509 0.1
R7520 3300
R7521 220
R7544 22K
R7545 22K
R7560 3300
R7549 220
R7550 1K
R7519 3300
C7514 56P
TL7501
TL7518
TL7519
TL7517
TL7508
TL7509
IC7503 PST7043 (RESET)
OUTPUT CIRCUIT
POWER VOLTAGE DET
V1
V2
GND
QR7501 MRN1404 (RESET ①:OFF)
47K
C7513 0.01
C7512 6V47
IC7504 XLJ9021B
VDD BUSY RESET VSS
CS CLK DI DO
IR7501 VEK6407
L7501 150μ
C7515 6V47
R7558 10K
R7518 3300
R7517 10K
R7516 3300
R7515 3300
R7514 10K
R7551 220
D7504 MA221
D7505 MA221
D7506 MA221
D7508 MA221
D7510 MA221
(NV-SD40EO ONLY) D7560 MA221
D7512 MA221
D7516 MA221
D7517 MA221
D7520 MA221
D7522 MA221
D7525 MA221
D7526 MA221
D7527 MA221
D7537 MA221
D7535 MA221
D7541 MA221
D7542 MA221
SW7502 EVQ11409K STOP
SW7501 EVQ11409K PAUSE/STILL
SW7503 EVQ11409K PLAY
SW7515 EVQ11409K PAL/MESECAM
SW7506 EVQ11409K REC
SW7504 EVQ11409K INSERT
SW7505 EVQ11409K A. DUB
SW7507 EVQ11409K F4
SW7508 EVQ11409K F3
SW7509 EVQ11409K F2
SW7510 EVQ11409K F1
SW7511 EVQ11409K TIMER REC
SW7514 EVQ11409K CLOCK
SW7513 EVQ11409K PROG
SW7516 EVQ11409K PRESET
(A13) (A5) (A6) (A8) (A7) (A19) (A2) (A9) (A18) (A11) (A12) (A10) (A1) (A15) (A4) (A14) (A3) (A17) (A16) (A19)
A-LINE
G F E D C B A
1 2 3 4 5 6 7 8 9 10

SEGMENT CONTROL SIGNAL GRID CONTROL SIGNAL TUNE CONTROL SIGNAL



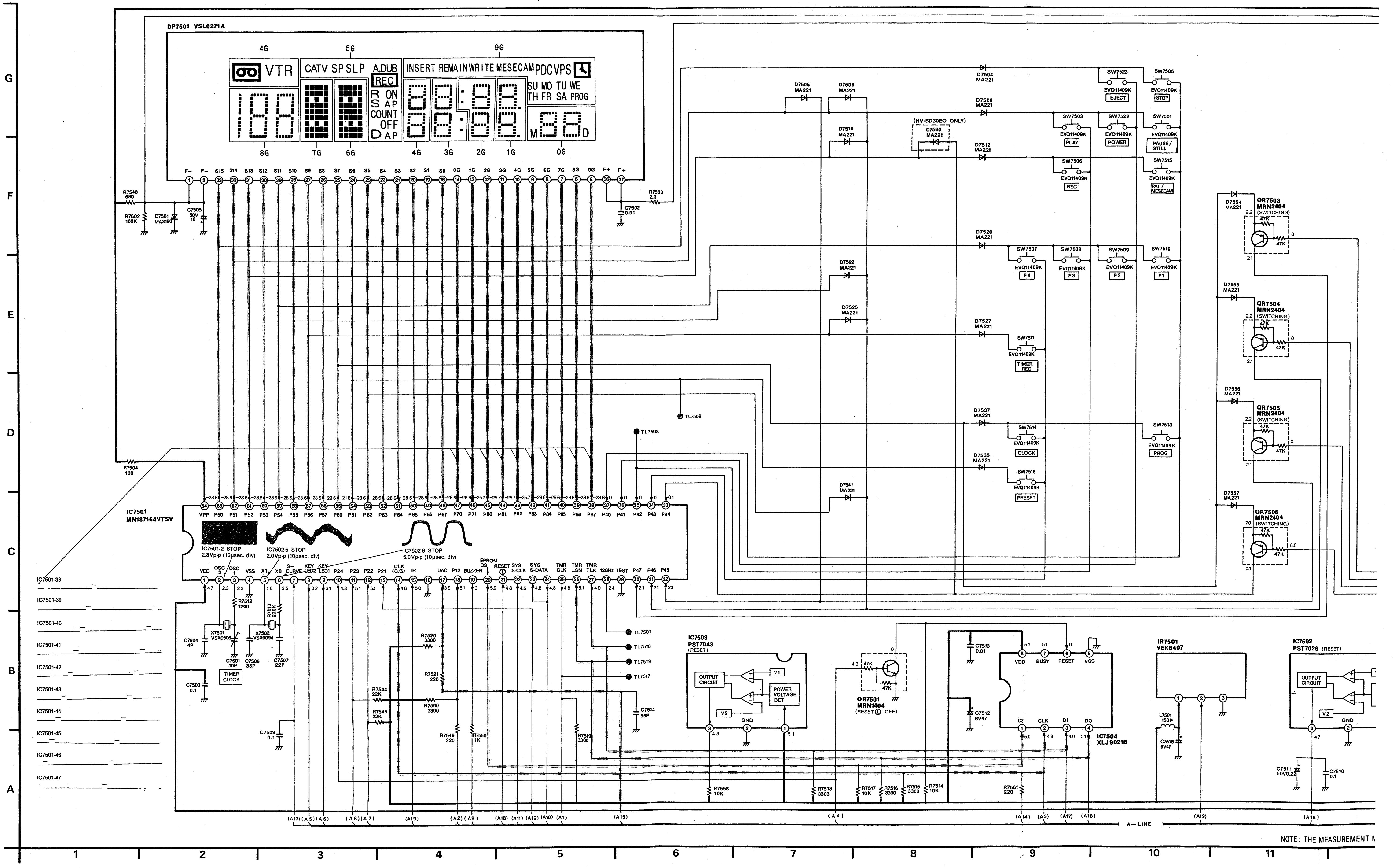
SW7502 EVQ11409K STOP
SW7503 EVQ11409K PLAY
SW7501 EVQ11409K PAUSE / STILL
SW7506 EVQ11409K REC
SW7515 EVQ11409K PAL/ MESECAM
SW7504 EVQ11409K INSERT
SW7505 EVQ11409K A. DUB
SW7508 EVQ11409K F3
SW7509 EVQ11409K F2
SW7510 EVQ11409K F1
SW7513 EVQ11409K PROG
D7554 MA221
QR7503 MRN2404 (SWITCHING)
D7555 MA221
QR7504 MRN2404 (SWITCHING)
D7556 MA221
QR7505 MRN2404 (SWITCHING)
D7557 MA221
QR7506 MRN2404 (SWITCHING)
47K
PICTURE
VR7501 20KB
D7546 LN376GCPXU
D7547 LN376GCPXU
D7548 LN376GCPXU
D7549 LN376GCPXU
R7541 270
Q7508 MSD601 (LED DRIVE)
R7531 2200
R7536 2200
R7535 1800
D7550 SEL2913KTP3
D7551 SEL2913KTP3
D7552 SEL2913KTP3
D7553 SEL2913KTP3
R7540 270
Q7510 MSD601 (LED DRIVE)
R7539 2200
R7538 2200
R7537 1800
PP7502
P51
P41
P50
PP6601
SW6601 EVQ11409K POWER
SW6602 EVQ11409K EJECT
OPERATION C.B.A. (VEP07716A)
P7502-15 REC 5.0Vp-p (5msec div)
P7502
R7554 220
R7555 220
R7522 220
TIMER BUS CLK
I/O CS
I/O CLK
RESET
GND
UNREG −29V
HEATER (+)
HEATER (−)
PICTURE CTL
GND (MIC)
MIC IN
MIC
P6002-1 … P6002-15
TO SYSTEM CONTROL & SERVO SECTION P6002 (Page: 4-5/C-17)
R4802 15K
Q4801 2SA1034 (INV)
R4801 10K
R4806 100K
Q4802 2SC2405 (BUFFER)
R4804 33K
C4802 16V10
C4804 0.12
TO BOTTOM PLATE
R4803 10K
R4805 330
R4807 100
C4801 16V47
R4808 4700
J4801 VJJ0281
MIC JACK
R7562 1500
C7518 16V 10
PP7501
REG 12V
MIC IN
MIC
GND (MIC)
C7519 16V 100
PS4801
MIC JACK C.B.A. (VEP00S77A)
P7505
JOG 2
JOG 1
GND
SHUTTLE 4
SHUTTLE 3
SHUTTLE 2
SHUTTLE 1
JOG/SHUTTLE ENCODER UNIT (VSQ0822)
P7501-11 REC 5.0Vp-p (10msec. div)
P7501-10 REC 5.0Vp-p (10msec. div)
P7501-2 REC 0.5Vp-p (5μsec. div)
P7501-1 REC 5.0Vp-p (5msec. div)
BUSY RESET VSS
CLK DI DO
IC7504 XLJ9021B
IR7501 VEK6407
L7501 150μ
C7515 6V47
IC7502 PST7026 (RESET)
OUTPUT CIRCUIT
V1
V2
POWER VOLTAGE DET.
GND
C7511 50V0.22
C7510 0.1
P7501
GND
BUZZER
S. DATA
S. CLOCK
SYNC
AFC S-CURVE
FS CLK
FS CS
S. NON SW 5W
BACK UP 5V
REG 12.3V
TIMER BUS LSN
TIMER BUS TLK
P6001-1 … P6001-13
R7552 220
R7553 220
TO SYSTEM CONTROL & SERVO SECTION P6001 (Page: 4-5/G-17)
A-LINE
9 10 11 12 13 14 15 16 17 18

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-11. TIMER SCHEMATIC DIAGRAM (NV-SD30EO/EV)

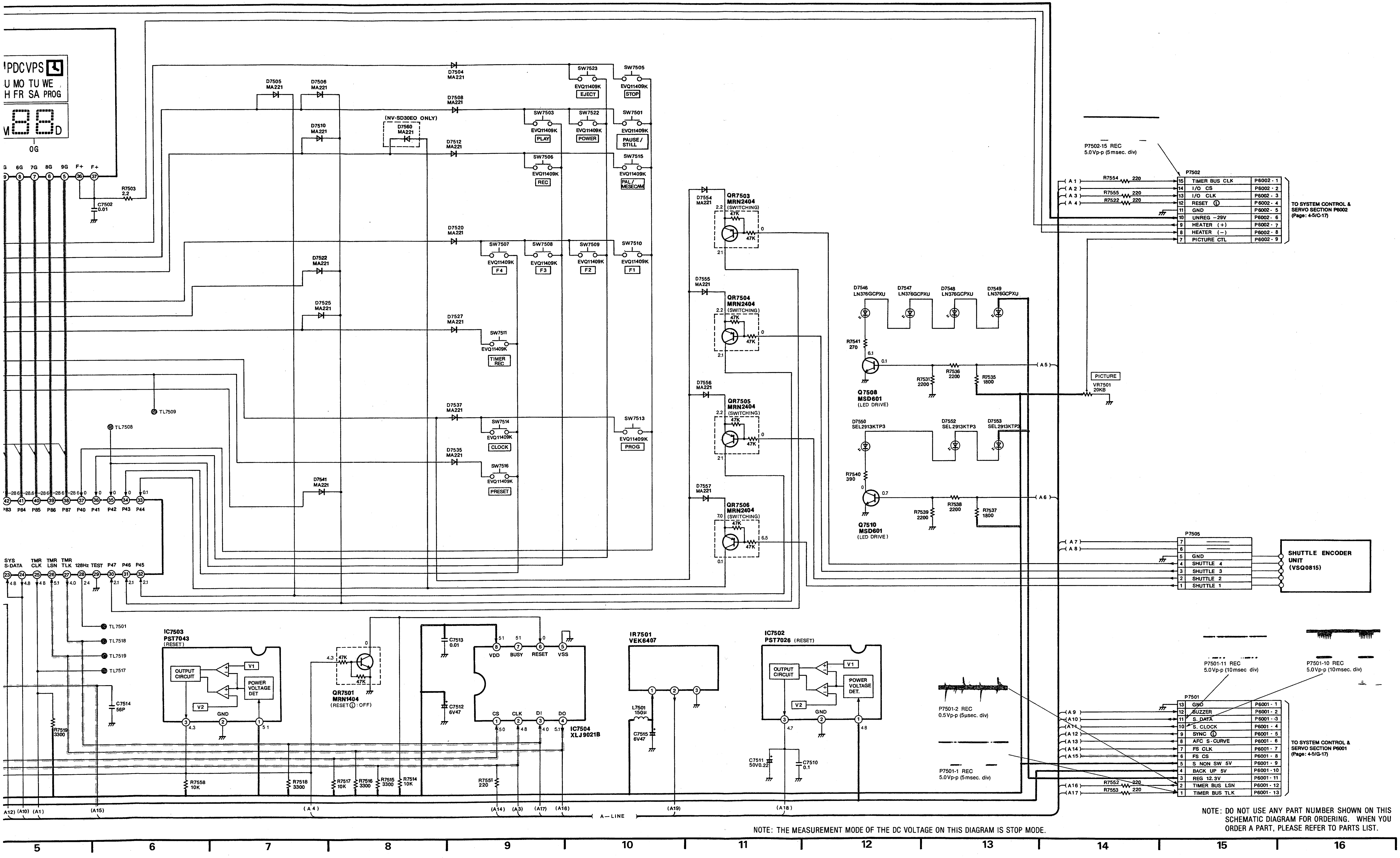
SEGMENT CONTROL SIGNAL GRID CONTROL SIGNAL



DP7501 VSL0271A
VTR
CATV SP SLP
A.DUB
REC
R ON
S AP
COUNT
OFF
D AP
INSERT REMAIN WRITE MESECAM PDC VPS
SU MO TU WE
TH FR SA PROG
4G 5G 9G 8G 7G 6G 4G 3G 2G 1G 0G
R7548 680
R7502 100K
D7501 MA3160
C7505 50V 10
C7502 0.01
R7503 2.2
R7504 100
TL7508
TL7509
IC7501 MN187164VTSV
IC7501-2 STOP 2.8Vp-p (10μsec. div)
IC7502-5 STOP 2.0Vp-p (10μsec. div)
IC7502-6 STOP 5.0Vp-p (10μsec. div)
VDD OSC2 OSC1 VSS X1 X0 S-CURVE KEY LED2 KEY LED1 P24 P23 P22 P21 CLK (C.G) IR DAC P12 BUZZER EPROM CS RESET SYS S-CLK SYS S-DATA TMR CLK TMR LSN TMR TLK 128Hz TEST P47 P46 P45
VPP P50 P51 P52 P53 P54 P55 P56 P57 P60 P61 P62 P63 P64 P65 P66 P67 P70 P71 P80 P81 P82 P83 P84 P85 P86 P87 P40 P41 P42 P43 P44
X7501 VSX0506
X7502 VSX0094
C7604 4P
C7501 10P
C7506 33P
C7507 22P
R7512 1200
R7513 220K
C7503 0.1
TIMER CLOCK
C7509 0.1
R7520 3300
R7521 220
R7544 22K
R7545 22K
R7560 3300
R7549 220
R7550 1K
R7519 3300
C7514 56P
TL7501
TL7518
TL7519
TL7517
IC7503 PST7043 (RESET)
OUTPUT CIRCUIT
V1
V2
POWER VOLTAGE DET
GND
R7558 10K
R7518 3300
R7517 10K
R7516 3300
R7515 3300
R7514 10K
QR7501 MRN1404 (RESET Ⓛ : OFF)
IC7504 XLJ9021B
VDD BUSY RESET VSS
CS CLK DI DO
C7513 0.01
C7512 6V47
R7551 220
IR7501 VEK6407
L7501 150μ
C7515 6V47
IC7502 PST7026 (RESET)
C7511 50V0.22
C7510 0.1
D7505 MA221
D7506 MA221
D7510 MA221
D7522 MA221
D7525 MA221
D7541 MA221
(NV-SD30EO ONLY)
D7560 MA221
D7504 MA221
D7508 MA221
D7512 MA221
D7520 MA221
D7527 MA221
D7537 MA221
D7535 MA221
SW7523 EVQ11409K EJECT
SW7505 EVQ11409K STOP
SW7503 EVQ11409K PLAY
SW7522 EVQ11409K POWER
SW7501 EVQ11409K PAUSE/STILL
SW7506 EVQ11409K REC
SW7515 EVQ11409K PAL/MESECAM
SW7507 EVQ11409K F4
SW7508 EVQ11409K F3
SW7509 EVQ11409K F2
SW7510 EVQ11409K F1
SW7511 EVQ11409K TIMER REC
SW7514 EVQ11409K CLOCK
SW7513 EVQ11409K PROG
SW7516 EVQ11409K PRESET
D7554 MA221
D7555 MA221
D7556 MA221
D7557 MA221
QR7503 MRN2404 (SWITCHING)
QR7504 MRN2404 (SWITCHING)
QR7505 MRN2404 (SWITCHING)
QR7506 MRN2404 (SWITCHING)
47K
IC7501-38
IC7501-39
IC7501-40
IC7501-41
IC7501-42
IC7501-43
IC7501-44
IC7501-45
IC7501-46
IC7501-47
(A13) (A5) (A6) (A8) (A7) (A19) (A2) (A9) (A18) (A11) (A12) (A10) (A1) (A15) (A4) (A14) (A3) (A17) (A16) (A19) (A18)
A—LINE
G F E D C B A
1 2 3 4 5 6 7 8 9 10 11

NOTE: THE MEASUREMENT

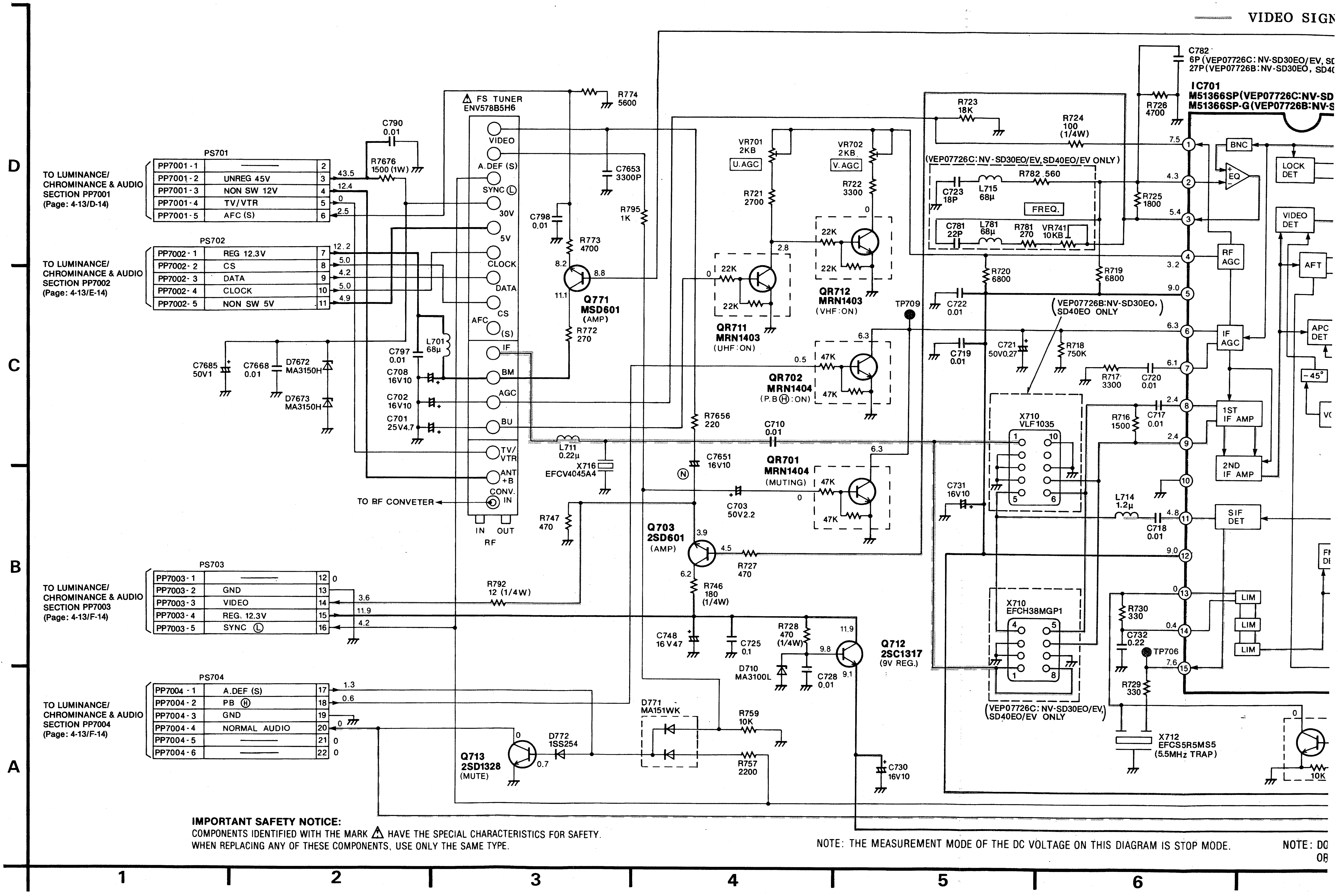
SEGMENT CONTROL SIGNAL GRID CONTROL SIGNAL TUNE CONTROL SIGNAL


PDC VPS
MO TU WE
H FR SA PROG
0G
6G 7G 8G 9G F+ F+
R7503 2.2
C7502 0.01
P83 P84 P85 P86 P87 P40 P41 P42 P43 P44
SYS S-DATA
TMR CLK
TMR LSN
TMR TLK
128Hz
TEST
P47 P46 P45
TL7509
TL7508
TL7501
TL7518
TL7519
TL7517
D7505 MA221
D7506 MA221
D7510 MA221
D7522 MA221
D7525 MA221
D7541 MA221
(NV-SD30EO ONLY)
D7560 MA221
D7504 MA221
D7508 MA221
D7512 MA221
D7520 MA221
D7527 MA221
D7537 MA221
D7535 MA221
SW7523 EVQ11409K EJECT
SW7505 EVQ11409K STOP
SW7503 EVQ11409K PLAY
SW7522 EVQ11409K POWER
SW7501 EVQ11409K PAUSE/STILL
SW7506 EVQ11409K REC
SW7515 EVQ11409K PAL/MESECAM
SW7507 EVQ11409K F4
SW7508 EVQ11409K F3
SW7509 EVQ11409K F2
SW7510 EVQ11409K F1
SW7511 EVQ11409K TIMER REC
SW7514 EVQ11409K CLOCK
SW7516 EVQ11409K PRESET
SW7513 EVQ11409K PROG
D7554 MA221
QR7503 MRN2404 (SWITCHING)
D7555 MA221
QR7504 MRN2404 (SWITCHING)
D7556 MA221
QR7505 MRN2404 (SWITCHING)
D7557 MA221
QR7506 MRN2404 (SWITCHING)
47K
D7546 LN376GCPXU
D7547 LN376GCPXU
D7548 LN376GCPXU
D7549 LN376GCPXU
R7541 270
Q7508 MSD601 (LED DRIVE)
R7531 2200
R7536 2200
R7535 1800
D7550 SEL2913KTP3
D7552 SEL2913KTP3
D7553 SEL2913KTP3
R7540 390
Q7510 MSD601 (LED DRIVE)
R7539 2200
R7538 2200
R7537 1800
PICTURE
VR7501 20KB
P7502-15 REC
5.0Vp-p (5msec. div)
P7502
(A 1) R7554 220
(A 2)
(A 3) R7555 220
(A 4) R7522 220
15 TIMER BUS CLK P6002 - 1
14 I/O CS P6002 - 2
13 I/O CLK P6002 - 3
12 RESET Ⓛ P6002 - 4
11 GND P6002 - 5
10 UNREG −29V P6002 - 6
9 HEATER (+) P6002 - 7
8 HEATER (−) P6002 - 8
7 PICTURE CTL P6002 - 9
TO SYSTEM CONTROL & SERVO SECTION P6002 (Page: 4-5/C-17)
P7505
(A 7)
(A 8)
5 GND
4 SHUTTLE 4
3 SHUTTLE 3
2 SHUTTLE 2
1 SHUTTLE 1
SHUTTLE ENCODER UNIT (VSQ0815)
IC7503 PST7043 (RESET)
OUTPUT CIRCUIT
V1
V2
POWER VOLTAGE DET
GND
C7514 56P
R7519 3300
QR7501 MRN1404 (RESET Ⓛ : OFF)
C7513 0.01
C7512 6V47
IC7504 XLJ9021B
VDD BUSY RESET VSS
CS CLK DI DO
IR7501 VEK6407
L7501 150μ
C7515 6V47
IC7502 PST7026 (RESET)
C7511 50V0.22
C7510 0.1
R7558 10K
R7518 3300
R7517 10K
R7516 3300
R7515 3300
R7514 10K
R7551 220
P7501-2 REC
0.5Vp-p (5μsec. div)
P7501-1 REC
5.0Vp-p (5msec. div)
P7501-11 REC
5.0Vp-p (10msec div)
P7501-10 REC
5.0Vp-p (10msec. div)
P7501
(A 9)
(A 10)
(A 11)
(A 12)
(A 13)
(A 14)
(A 15)
(A 16) R7552 220
(A 17) R7553 220
13 GND P6001 - 1
12 BUZZER P6001 - 2
11 S. DATA P6001 - 3
10 S. CLOCK P6001 - 4
9 SYNC Ⓛ P6001 - 5
8 AFC S-CURVE P6001 - 6
7 FS CLK P6001 - 7
6 FS CS P6001 - 8
5 S NON SW 5V P6001 - 9
4 BACK UP 5V P6001 - 10
3 REG 12.3V P6001 - 11
2 TIMER BUS LSN P6001 - 12
1 TIMER BUS TLK P6001 - 13
TO SYSTEM CONTROL & SERVO SECTION P6001 (Page: 4-5/G-17)
(A12) (A10) (A1) (A15) (A 4) (A14) (A3) (A17) (A16) (A19) (A18)
A — LINE
5 6 7 8 9 10 11 12 13 14 15 16

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-12. TV DEMODULATOR PACK SCHEMATIC DIAGRAM

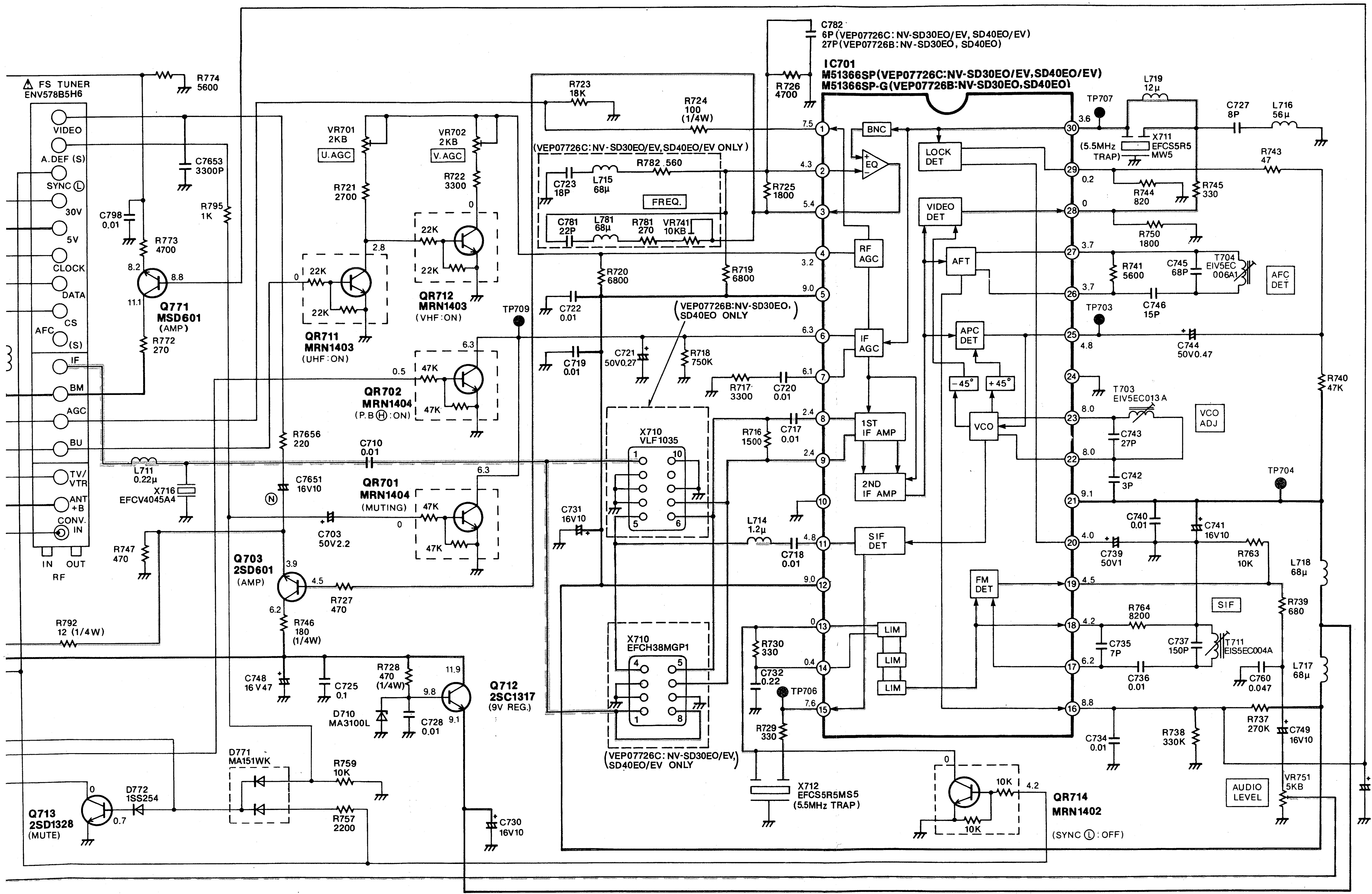

VIDEO SIGN
D
C
B
A
1
2
3
4
5
6
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7001 (Page: 4-13/D-14)
PS701
PP7001-1
PP7001-2 UNREG 45V
PP7001-3 NON SW 12V
PP7001-4 TV/VTR
PP7001-5 AFC (S)
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7002 (Page: 4-13/E-14)
PS702
PP7002-1 REG 12.3V
PP7002-2 CS
PP7002-3 DATA
PP7002-4 CLOCK
PP7002-5 NON SW 5V
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7003 (Page: 4-13/F-14)
PS703
PP7003-1
PP7003-2 GND
PP7003-3 VIDEO
PP7003-4 REG. 12.3V
PP7003-5 SYNC Ⓛ
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7004 (Page: 4-13/F-14)
PS704
PP7004-1 A.DEF (S)
PP7004-2 PB Ⓗ
PP7004-3 GND
PP7004-4 NORMAL AUDIO
PP7004-5
PP7004-6
⚠ FS TUNER ENV578B5H6
VIDEO
A.DEF (S)
SYNC Ⓛ
30V
5V
CLOCK
DATA
CS
AFC (S)
IF
BM
AGC
BU
TV/VTR
ANT +B
CONV.
IN
IN OUT RF
TO RF CONVETER
C790 0.01
R7676 1500 (1W)
R774 5600
C7653 3300P
R795 1K
C798 0.01
R773 4700
Q771 MSD601 (AMP)
R772 270
L701 68µ
C797 0.01
C708 16V10
C702 16V10
C701 25V4.7
C7685 50V1
C7668 0.01
D7672 MA3150H
D7673 MA3150H
L711 0.22µ
X716 EFCV4045A4
R747 470
R792 12 (1/4W)
Q713 2SD1328 (MUTE)
D772 1SS254
D771 MA151WK
Q703 2SD601 (AMP)
R727 470
R746 180 (1/4W)
R7656 220
C7651 16V10
C703 50V2.2
C710 0.01
C748 16V47
C725 0.1
R728 470 (1/4W)
D710 MA3100L
C728 0.01
Q712 2SC1317 (9V REG.)
R759 10K
R757 2200
C730 16V10
VR701 2KB
U.AGC
R721 2700
QR711 MRN1403 (UHF:ON)
VR702 2KB
V.AGC
R722 3300
QR712 MRN1403 (VHF:ON)
QR702 MRN1404 (P.B Ⓗ:ON)
QR701 MRN1404 (MUTING)
22K
47K
TP709
C722 0.01
C719 0.01
C721 50V0.27
R720 6800
R719 6800
R718 750K
R717 3300
C720 0.01
R723 18K
R724 100 (1/4W)
(VEP07726C: NV-SD30EO/EV,SD40EO/EV ONLY)
C723 18P
L715 68µ
R782 560
FREQ.
C781 22P
L781 68µ
R781 270
VR741 10KB
(VEP07726B:NV-SD30EO, SD40EO ONLY
X710 VLF1035
C731 16V10
X710 EFCH38MGP1
(VEP07726C: NV-SD30EO/EV, SD40EO/EV ONLY
R716 1500
C717 0.01
L714 1.2µ
C718 0.01
R730 330
C732 0.22
TP706
R729 330
X712 EFCS5R5MS5 (5.5MHz TRAP)
R725 1800
R726 4700
C782 6P (VEP07726C: NV-SD30EO/EV, SD
27P (VEP07726B: NV-SD30EO, SD4
IC701 M51366SP(VEP07726C:NV-SD
M51366SP-G(VEP07726B:NV-S
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
AFT
IF AGC
APC DET
-45°
1ST IF AMP
2ND IF AMP
SIF DET
LIM
LIM
LIM
10K
Ⓝ
NOTE: DC
OF

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IAGRAM

VIDEO SIGNAL PATH — AUDIO SIGNAL PATH



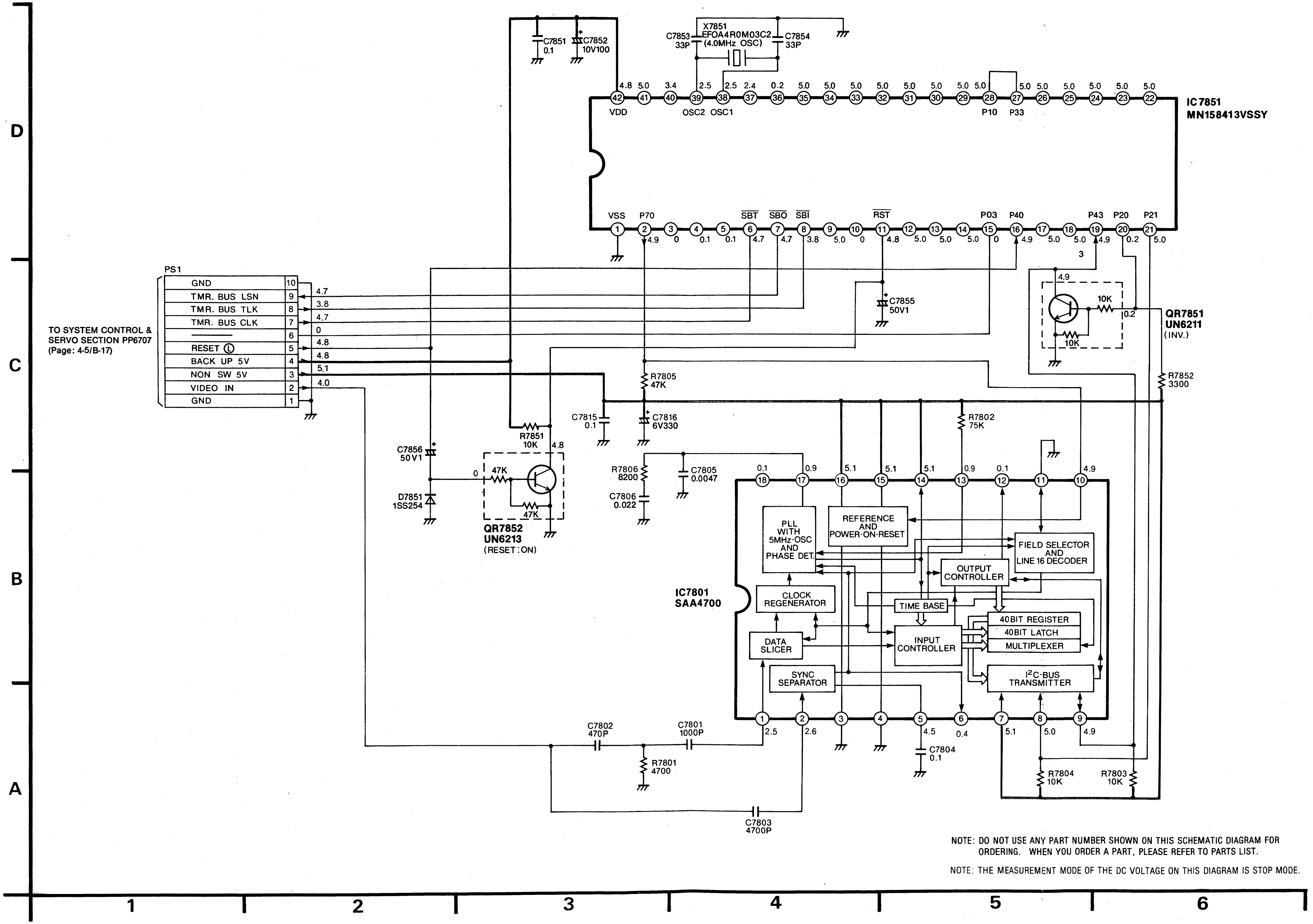
⚠ FS TUNER
ENV578B5H6
VIDEO
VIDEO
A.DEF (S)
SYNC Ⓛ
30V
5V
CLOCK
DATA
CS
AFC (S)
IF
BM
AGC
BU
TV/VTR
ANT +B
CONV.
IN
IN OUT
RF
R774 5600
C7653 3300P
C798 0.01
R795 1K
R773 4700
Q771 MSD601 (AMP)
R772 270
L711 0.22μ
X716 EFCV4045A4
R747 470
R792 12 (1/4W)
VR701 2KB
U.AGC
VR702 2KB
V.AGC
R721 2700
R722 3300
QR711 MRN1403 (UHF:ON)
QR712 MRN1403 (VHF:ON)
QR702 MRN1404 (P.B Ⓗ:ON)
QR701 MRN1404 (MUTING)
R7656 220
C710 0.01
C7651 16V10
C703 50V2.2
Q703 2SD601 (AMP)
R727 470
R746 180 (1/4W)
C748 16V47
C725 0.1
R728 470 (1/4W)
D710 MA3100L
C728 0.01
Q712 2SC1317 (9V REG.)
D771 MA151WK
R759 10K
R757 2200
D772 1SS254
Q713 2SD1328 (MUTE)
C730 16V10
TP709
R723 18K
R724 100 (1/4W)
(VEP07726C: NV-SD30EO/EV, SD40EO/EV ONLY)
C723 18P
L715 68μ
R782 560
FREQ.
C781 22P
L781 68μ
R781 270
VR741 10KB
R720 6800
R719 6800
C722 0.01
C719 0.01
C721 50V0.27
R718 750K
(VEP07726B: NV-SD30EO, SD40EO ONLY)
R717 3300
C720 0.01
R716 1500
C717 0.01
X710 VLF1035
C731 16V10
L714 1.2μ
C718 0.01
X710 EFCH38MGP1
(VEP07726C: NV-SD30EO/EV, SD40EO/EV ONLY)
R730 330
C732 0.22
TP706
R729 330
X712 EFCS5R5MS5 (5.5MHz TRAP)
C782 6P (VEP07726C: NV-SD30EO/EV, SD40EO/EV) 27P (VEP07726B: NV-SD30EO, SD40EO)
R726 4700
R725 1800
IC701 M51366SP (VEP07726C: NV-SD30EO/EV, SD40EO/EV) M51366SP-G (VEP07726B: NV-SD30EO, SD40EO)
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
AFT
APC DET
IF AGC
-45°
+45°
VCO
1ST IF AMP
2ND IF AMP
SIF DET
FM DET
LIM
LIM
LIM
TP707
L719 12μ
X711 EFCS5R5 MW5
(5.5MHz TRAP)
C727 8P
L716 56μ
R743 47
R744 820
R745 330
R750 1800
R741 5600
C745 68P
T704 EIV5EC006A1
AFC DET
C746 15P
TP703
C744 50V0.47
T703 EIV5EC013A
VCO ADJ
C743 27P
C742 3P
TP704
R740 47K
C740 0.01
C741 16V10
C739 50V1
R763 10K
L718 68μ
R764 8200
SIF
R739 680
C735 7P
C737 150P
T711 EIS5EC004A
C736 0.01
C760 0.047
L717 68μ
R737 270K
C749 16V10
C734 0.01
R738 330K
AUDIO LEVEL
VR751 5KB
C707 50V0.1
QR714 MRN1402 (SYNC Ⓛ: OFF)
10K
10K

PECIAL CHARACTERISTICS FOR SAFETY.
THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-13. VPS PACK SCHEMATIC DIAGRAM (NV-SD30EV, SD40EV)


IC7851
MN158413VSSY
VDD
OSC2 OSC1
P10 P33
VSS
P70
SBT SBO SBI
RST
P03 P40
P43 P20 P21
X7851
EFOA4R0M03C2
(4.0MHz OSC)
C7853 33P
C7854 33P
C7851 0.1
C7852 10V100
C7855 50V1
QR7851
UN6211
(INV.)
10K
R7852 3300
PS1
GND
TMR. BUS LSN
TMR. BUS TLK
TMR. BUS CLK
RESET Ⓛ
BACK UP 5V
NON SW 5V
VIDEO IN
GND
TO SYSTEM CONTROL & SERVO SECTION PP6707 (Page: 4-5/B-17)
R7805 47K
C7815 0.1
C7816 6V330
R7851 10K
C7856 50V1
D7851 1SS254
47K
QR7852
UN6213
(RESET:ON)
R7806 8200
C7805 0.0047
C7806 0.022
R7802 75K
IC7801
SAA4700
PLL WITH 5MHz-OSC AND PHASE DET.
REFERENCE AND POWER-ON-RESET
FIELD SELECTOR AND LINE 16 DECODER
OUTPUT CONTROLLER
CLOCK REGENERATOR
TIME BASE
40BIT REGISTER
40BIT LATCH
MULTIPLEXER
DATA SLICER
INPUT CONTROLLER
SYNC SEPARATOR
I²C-BUS TRANSMITTER
C7802 470P
C7801 1000P
R7801 4700
C7803 4700P
C7804 0.1
R7804 10K
R7803 10K
A
B
C
D
1
2
3
4
5
6

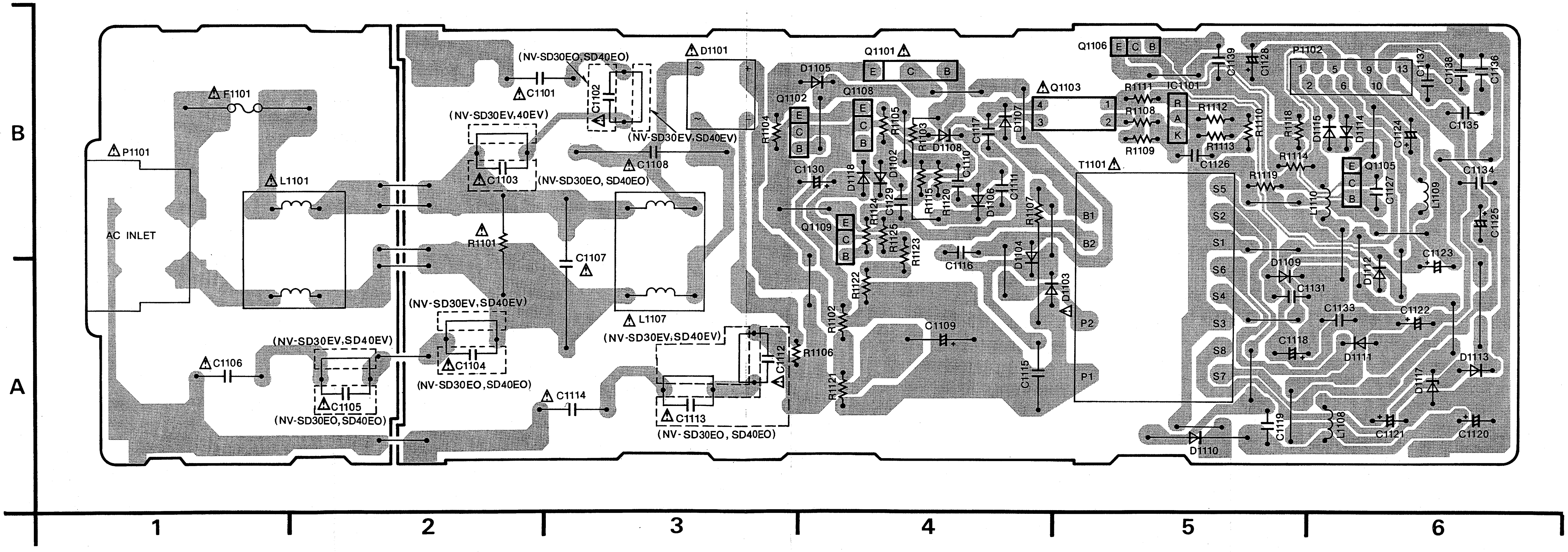
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

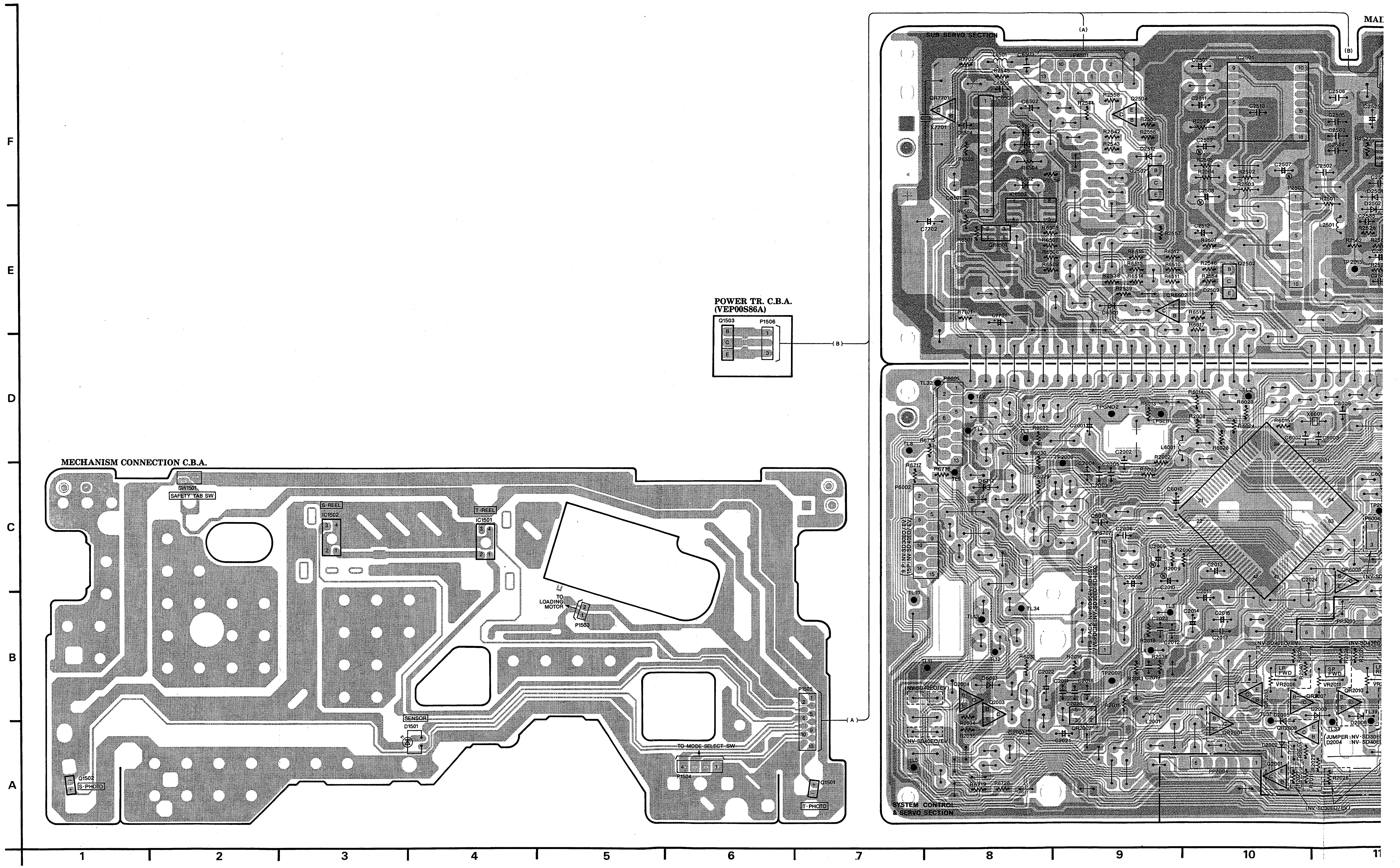
4-14. POWER C.B.A. (VEP01518J: NV-SD30EO, SD40EO) (VEP01518K: NV-SD30EV, SD40EV)

POWER C.B.A.	
Transistor	
Q1101	B-4
Q1102	B-3
Q1103	B-5
Q1105	B-6
Q1106	B-5
Q1108	B-4
Q1109	B-4
Integrated Circuit	
IC1101	B-5
Connector	
P1101	B-1
P1102	B-6

ADDRESS INFORMATION

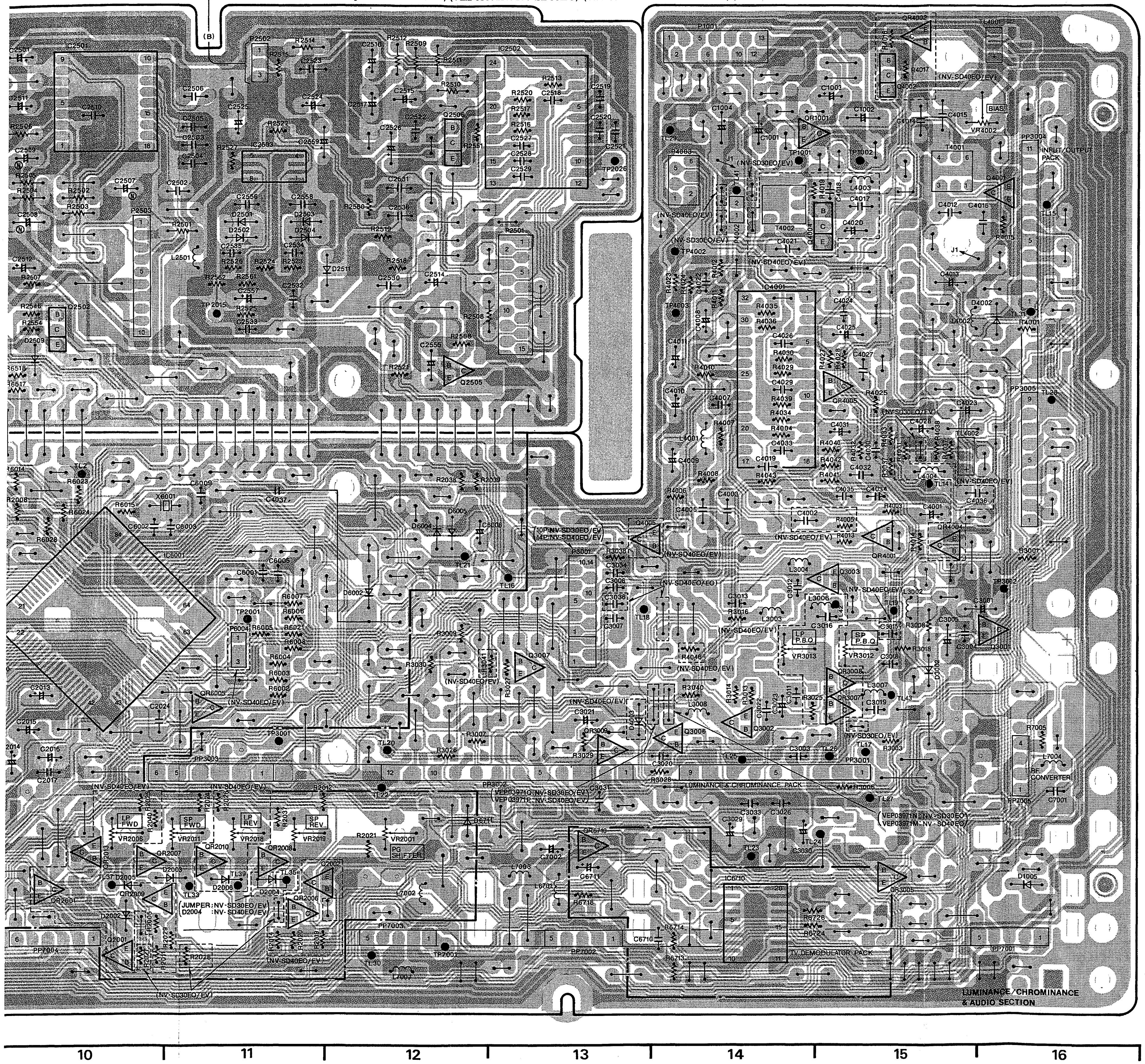

B
A
1
2
3
4
5
6
P1101
AC INLET
F1101
L1101
C1106
C1105
(NV-SD30EV,SD40EV)
(NV-SD30EO,SD40EO)
C1101
C1102
C1103
C1104
C1107
C1108
C1113
C1114
R1101
L1107
D1101
C1112
R1106
(NV-SD30EV,40EV)
Q1101
Q1102
Q1103
Q1105
Q1106
Q1108
Q1109
IC1101
T1101
P1102
D1102
D1103
D1104
D1105
D1106
D1107
D1108
D1109
D1110
D1111
D1112
D1113
D1114
D1115
D1117
D1118
R1102
R1103
R1104
R1105
R1107
R1108
R1109
R1110
R1111
R1112
R1113
R1114
R1115
R1118
R1119
R1120
R1121
R1122
R1123
R1124
R1125
C1109
C1110
C1111
C1115
C1116
C1117
C1118
C1119
C1120
C1121
C1122
C1123
C1124
C1125
C1126
C1127
C1128
C1129
C1130
C1131
C1133
C1134
C1135
C1136
C1137
C1138
C1139
L1108
L1109
L1110
E C B
R A K
B1
B2
P1
P2
S1
S2
S3
S4
S5
S6
S7
S8

4-15. MAIN C.B.A. (VEP03971Q: NV-SD30EO/EV) (VEP03971N: NV-SD30EO) (VEP03971P: NV-SD40EO/EV) (VEP03971M: NV-SD40EO)



MECHANISM CONNECTION C.B.A.
SW1501
SAFETY TAB SW
S-REEL
IC1502
T-REEL
IC1501
TO LOADING MOTOR
P1503
SENSOR
D1501
P1505
TO MODE SELECT SW
P1504
Q1502
S-PHOTO
Q1501
T-PHOTO
POWER TR. C.B.A. (VEP00S86A)
Q1503
P1506
(A)
(B)
SUB SERVO SECTION
SYSTEM CONTROL & SERVO SECTION
IC6001
X6001
L6001
TPGND2
TPSERV
P6001
P6002
PP6707
PP7004
PP3003
(NV-SD40EO/EV)
LP FWD
SP FWD
VR2008
VR2011
JUMPER: NV-SD30EO
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
11

MAIN C.B.A. (VEP03971Q: NV-SD30EO/EV) (VEP03971N: NV-SD30EO) (VEP03971P: NV-SD40EO/EV) (VEP03971M: NV-SD40EO)


(B)
P1001
INPUT/OUTPUT PACK
BIAS
LUMINANCE & CHROMINANCE PACK
TV DEMODULATOR PACK
RF CONVERTER
LUMINANCE/CHROMINANCE & AUDIO SECTION
LP FWD
SP FWD
LP REV
SP REV
PG SHIFTER
LP P.B.Q.
SP P.B.Q.
JUMPER: NV-SD30EO/EV D2004 :NV-SD40EO/EV
10
11
12
13
14
15
16

MAIN C.B.A. ADDRESS INFORMATION

SYSTEM CONTROL & SERVO Section	
Transistor	
Q2001	A-10
Q2002	A-12
Q2003	B-8
Q2004	B-8
Transistor & Resistor	
QR2001	A-10
QR2002	A-9
QR2006	A-11
QR2007	B-10
QR2008	B-11
QR2009	A-10
QR2010	B-11
QR2013	B-10
QR6005	C-11
QR6710	B-13
Integrated Circuit	
IC6001	C-11
IC6710	A-14
Test Point	
TP2001	C-11
TP2002	B-9
TP2009	C-9
TPGND2	D-9
TPSERV	D-9
Adjustment	
VR2001	B-12
VR2005	B-10
VR2011	B-11
VR2018	B-11
VR2019	B-11
Connector	
P6001	D-8
P6002	C-7
P6004	C-11
PP6707	C-9

ADDRESS INFORMATION

SUB SERVO Section	
Transistor	
Q1501	A-7
Q1502	A-1
Q1503	D-6
Q2502	E-10
Q2504	F-9
Q2505	E-12
Q2506	F-12
Q2507	F-9
Transistor & Resistor	
QR6501	E-8
QR6502	E-9
QR7701	F-8
Integrated Circuit	
IC1501	C-4
IC1502	C-3
IC2501	F-10
IC2502	F-13
IC2503	F-11
IC6501	F-8
IC6502	E-8
Test Point	
TP2015	E-11
TP2026	F-13
Connector	
P1503	B-5
P1504	A-6
P1505	B-7
P1506	D-6
P2501	E-13
P2502	F-11
P2503	F-10
P6501	F-9

ADDRESS INFORMATION

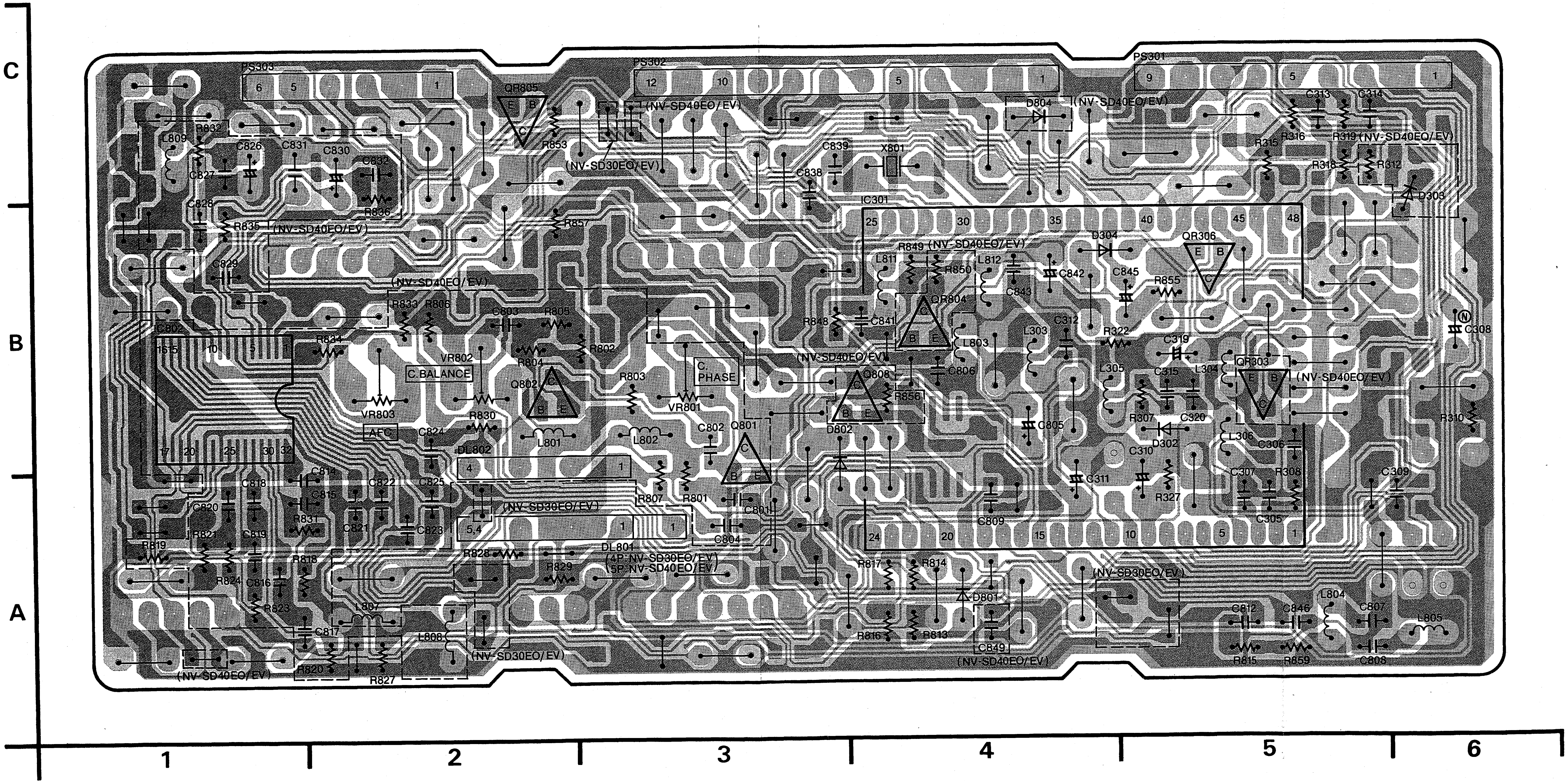
LUMINANCE/ CHROMINANCE & AUDIO Section	
Transistor	
Q3001	C-16
Q3002	B-14
Q3003	C-15
Q3006	B-14
Q3007	C-13
Q4001	F-16
Q4002	F-15
Q4004	E-14
Q4005	D-13
Transistor & Resistor	
QR1001	F-14
QR3005	A-15
QR3007	C-15
QR3008	C-15
QR3009	B-13
QR4001	D-15
QR4002	F-15
QR4004	D-15
QR4005	D-15
Integrated Circuit	
IC4001	E-14
Test Point	
TP1001	F-14
TP1002	F-15
TP3001	B-11
TP3002	C-16
TP4002	E-14
TP4003	E-14
TPGND1	F-14
Adjustment	
VR3012	C-15
VR3013	C-14
Connector	
P1001	F-14
P3001	C-13
P4003	F-14
PP3001	B-14
PP3002	B-13
PP3004	F-16
PP3005	D-16
PP7001	A-16
PP7002	A-13
PP7003	A-12
PP7004	A-10
PP7005	B-16

ADDRESS INFORMATION

4-16. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03975K: NV-SD30EO/EV) (VEP03975J: NV-SD40EO/EV)

LUMINANCE & CHROMINANCE PACK C.B.A.			
Transistor		**Adjustment**	
Q801 Q802 Q808	B-3 B-2 B-4	VR801 VR802 VR803	B-3 B-2 B-2
Transistor & Resistor		**Connector**	
QR303 QR306 QR804 QR805	B-5 B-5 B-4 C-2	PS301 PS302 PS303	C-5 C-3 C-1
Integrated Circuit			
IC301 IC802	B-4 B-1		

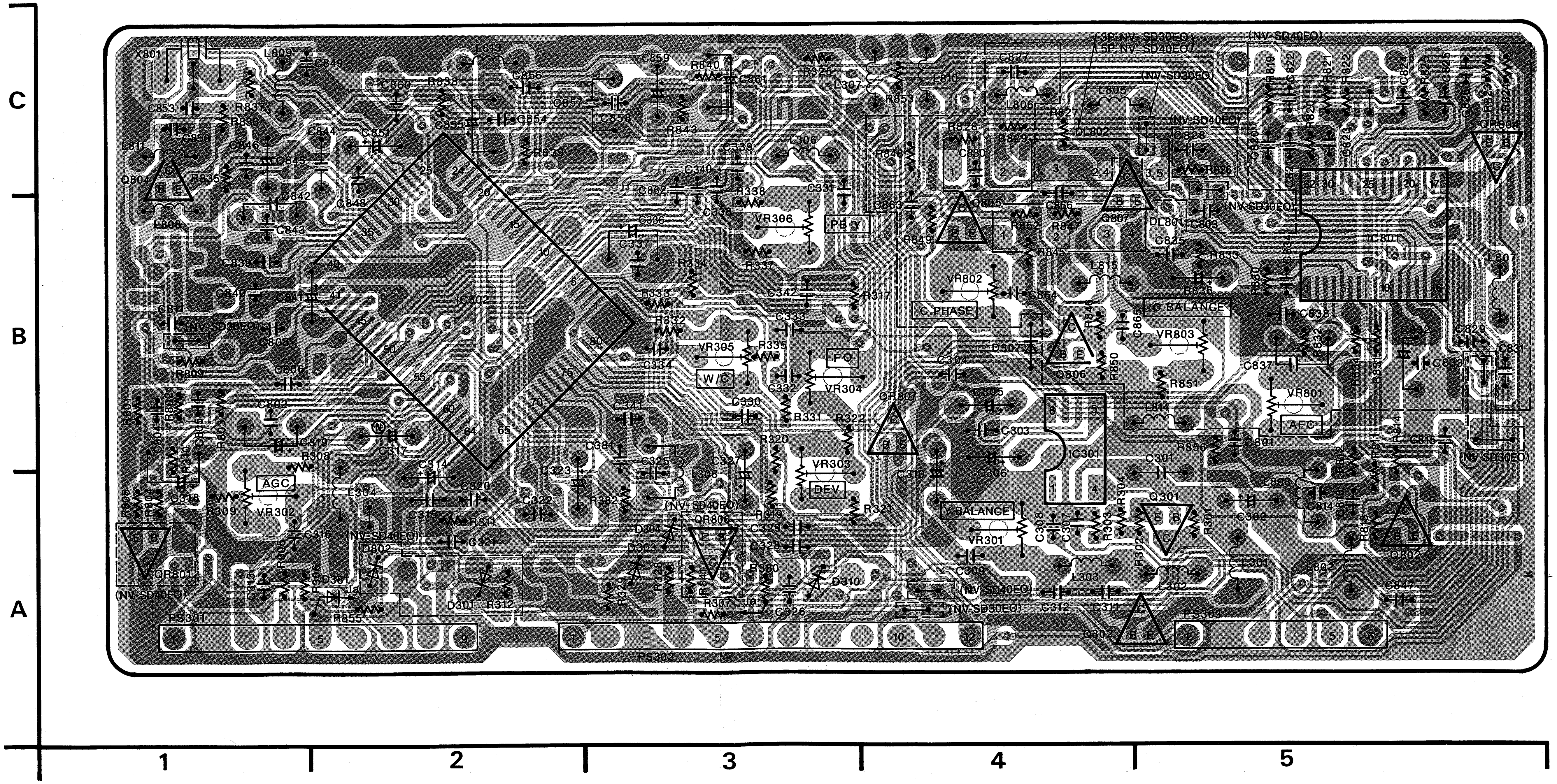
ADDRESS INFORMATION


C
B
A
1
2
3
4
5
6
PS303
PS302
PS301
QR805
(NV-SD40EO/EV)
(NV-SD30EO/EV)
R853
D804
C313
C314
R315
R316
R319
R318
R312
D303
L809
R832
C826
C831
C830
C832
C827
R836
C828
R835
R857
C839
X801
C838
IC301
25
30
35
40
45
48
D304
QR306
C829
R849
L811
R850
L812
C842
C845
R855
C843
R833
R806
C803
R805
R848
C841
QR804
C312
R322
C319
C308
C802
IC802
R834
R804
R802
L803
L303
QR303
C806
L305
C315
L304
VR802
C.BALANCE
Q802
R803
C.PHASE
Q808
R856
VR801
VR803
AFC
R830
C824
L801
L802
C802
Q801
D802
C805
R307
C320
R310
D302
L306
C310
C306
DL802
C814
C818
C822
C825
R807
R801
C311
R327
C307
R308
C309
C820
C815
R831
C821
C823
C801
C809
C305
24
20
15
10
5
1
R819
R821
C819
DL801
(4P NV-SD30EO/EV)
(5P NV-SD40EO/EV)
C804
R828
R829
R818
R824
C816
R823
R817
R814
D801
L807
C817
L808
R816
R813
C849
C812
C846
L804
C807
L805
R820
R827
R815
R859
C808

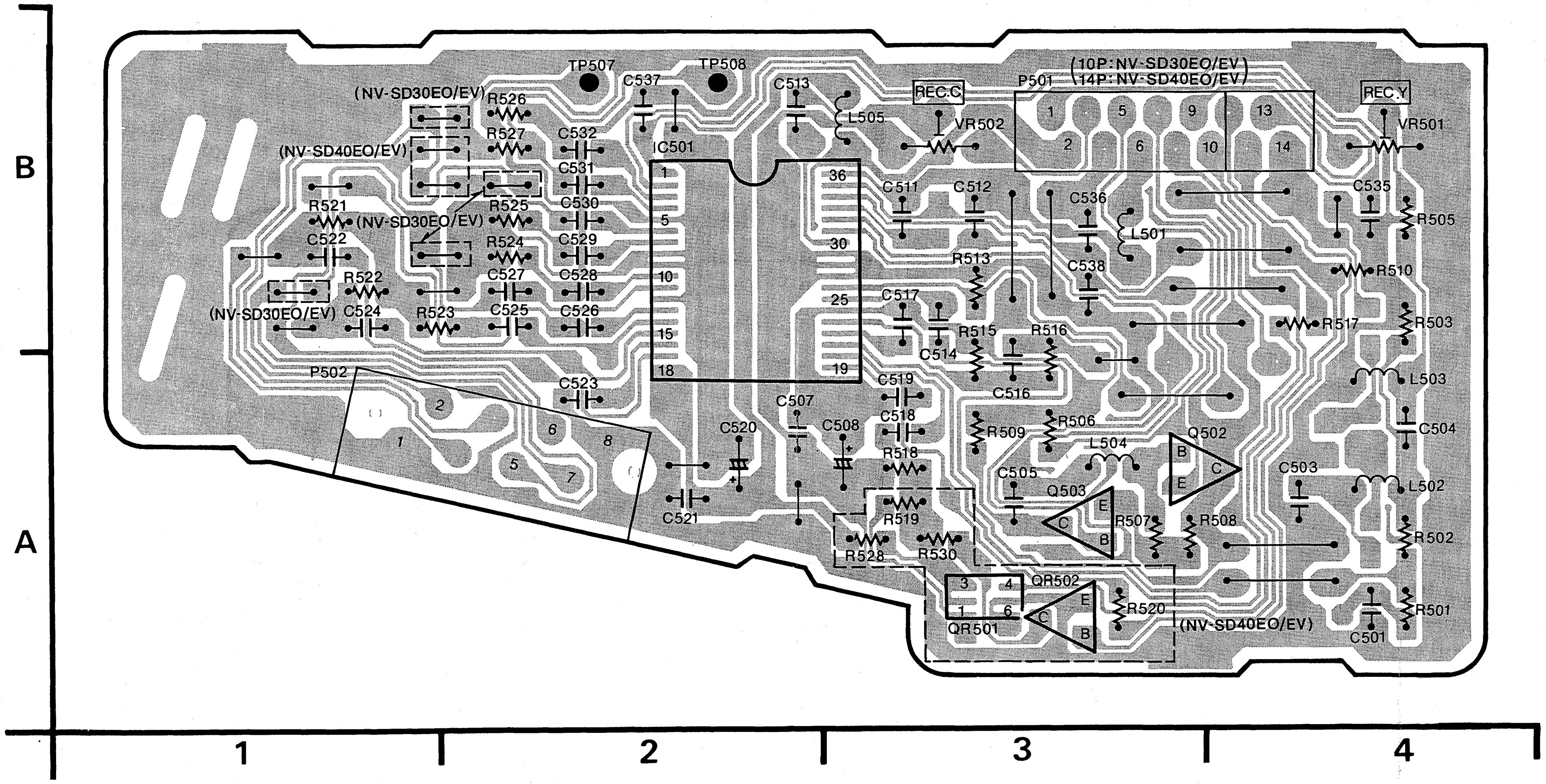
4-17. LUMINANCE & CHROMINANCE PACK C.B.A (VEP03A01CPE: NV-SD30EO) (VEP03A01FPE: NV-SD40EO)

LUMINANCE & CHROMINANCE PACK C.B.A.			
Transistor		**Adjustment**	
Q301	A-5	VR301	A-4
Q302	A-4	VR302	A-1
Q802	A-5	VR303	A-3
Q804	C-1	VR304	B-3
Q805	B-4	VR305	B-3
Q806	B-4	VR306	B-3
Q807	C-4	VR801	B-5
Transistor & Resistor		VR802	B-4
QR801	A-1	VR803	B-5
QR804	C-5	**Connector**	
QR806	A-3	PS301	A-1
QR807	B-4	PS302	A-3
Integrated Circuit		PS303	A-5
IC301	B-4		
IC302	B-2		
IC801	B-5		

ADDRESS INFORMATION


C
B
A
1
2
3
4
5
IC302
IC301
IC801
PS301
PS302
PS303
AGC
VR302
W/C
VR305
FO
VR304
DEV
VR303
PB Y
VR306
C PHASE
VR802
C BALANCE
VR803
Y BALANCE
VR301
AFC
VR801
Q301
Q302
Q802
Q804
Q805
Q806
Q807
QR801
QR804
QR806
QR807
X801
3P: NV-SD30EO
5P: NV-SD40EO
(NV-SD30EO)
(NV-SD40EO)

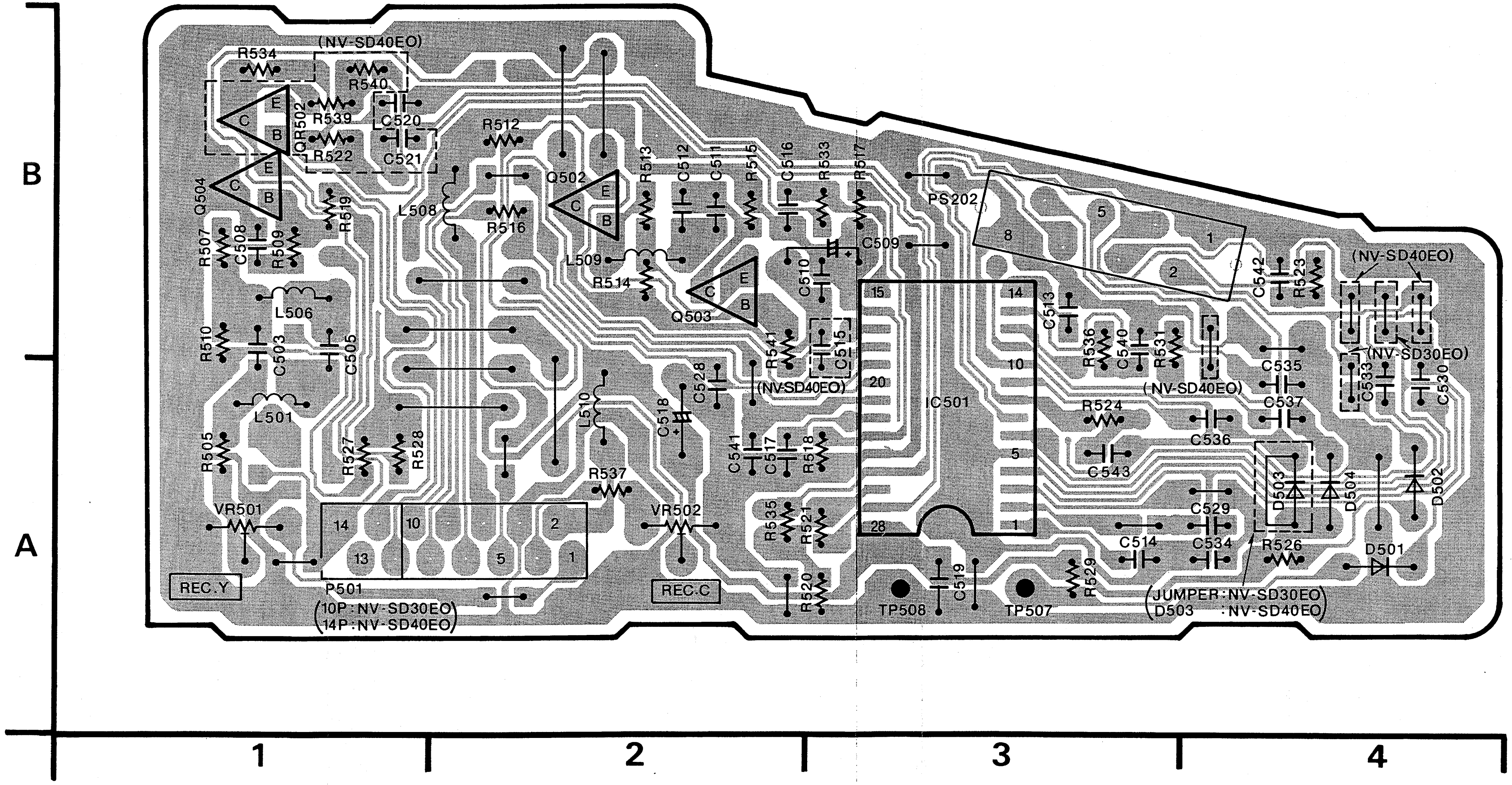
4-18. HEAD AMP C.B.A. (VEP05180B: NV-SD30EO/EV) (VEP05180A: NV-SD40EO/EV)


B
A
1
2
3
4
TP507
TP508
C537
C513
L505
REC.C
VR502
P501
(10P:NV-SD30EO/EV)
(14P:NV-SD40EO/EV)
1
2
5
6
9
10
13
14
REC.Y
VR501
(NV-SD30EO/EV)
R526
R527
C532
(NV-SD40EO/EV)
C531
IC501
1
5
10
15
18
36
30
25
19
R521
R525
(NV-SD30EO/EV)
C530
C522
R524
C529
R522
C527
C528
(NV-SD30EO/EV)
C524
R523
C525
C526
C511
C512
C536
L501
C535
R505
R513
C538
R510
C517
R515
R516
C514
R517
R503
C516
L503
P502
C523
C519
C507
C518
R509
R506
Q502
C504
C520
C508
L504
B
E
C
R518
C505
Q503
C503
L502
E
C
B
R519
R507
R508
C521
R528
R530
R502
3
4
QR502
1
6
E
R520
C
QR501
B
(NV-SD40EO/EV)
C501
R501
1
2
5
6
7
8

HEAD AMP C.B.A.	
Transistor	
Q502 Q503	A-3 A-3
Transistor & Resistor	
QR501 QR502	A-3 A-3
Integrated Circuit	
IC501	B-2
Test Point	
TP507 TP508	B-2 B-2
Adjustment	
VR501 VR502	B-4 B-3
Connector	
P501 P502	B-3 A-1

ADDRESS INFORMATION

4-19. HEAD AMP C.B.A. (VEP05182APE: NV-SD30EO) (VEP05182BPE: NV-SD40EO)


B
A
1
2
3
4
R534
(NV-SD40EO)
R540
R539
C520
R522
C521
QR502
E
C
B
Q504
R512
Q502
L508
R516
R513
C512
C511
R515
C516
R533
R517
PS202
R519
R507
C508
R509
L509
R514
Q503
C509
C510
C515
R541
(NV-SD40EO)
L506
R510
C503
C505
L501
R505
R527
R528
L510
C518
C528
C541
C517
R518
R537
VR501
VR502
P501
(10P: NV-SD30EO)
(14P: NV-SD40EO)
14
13
10
5
2
1
REC.Y
REC.C
R535
R521
R520
IC501
15
14
20
10
5
28
1
8
5
1
2
TP508
C519
TP507
R529
C513
R536
C540
R531
(NV-SD40EO)
R524
C536
C543
C542
R523
(NV-SD40EO)
(NV-SD30EO)
C535
C537
C533
C530
C529
C514
C534
R526
D503
D504
D502
D501
(JUMPER: NV-SD30EO)
(D503 : NV-SD40EO)

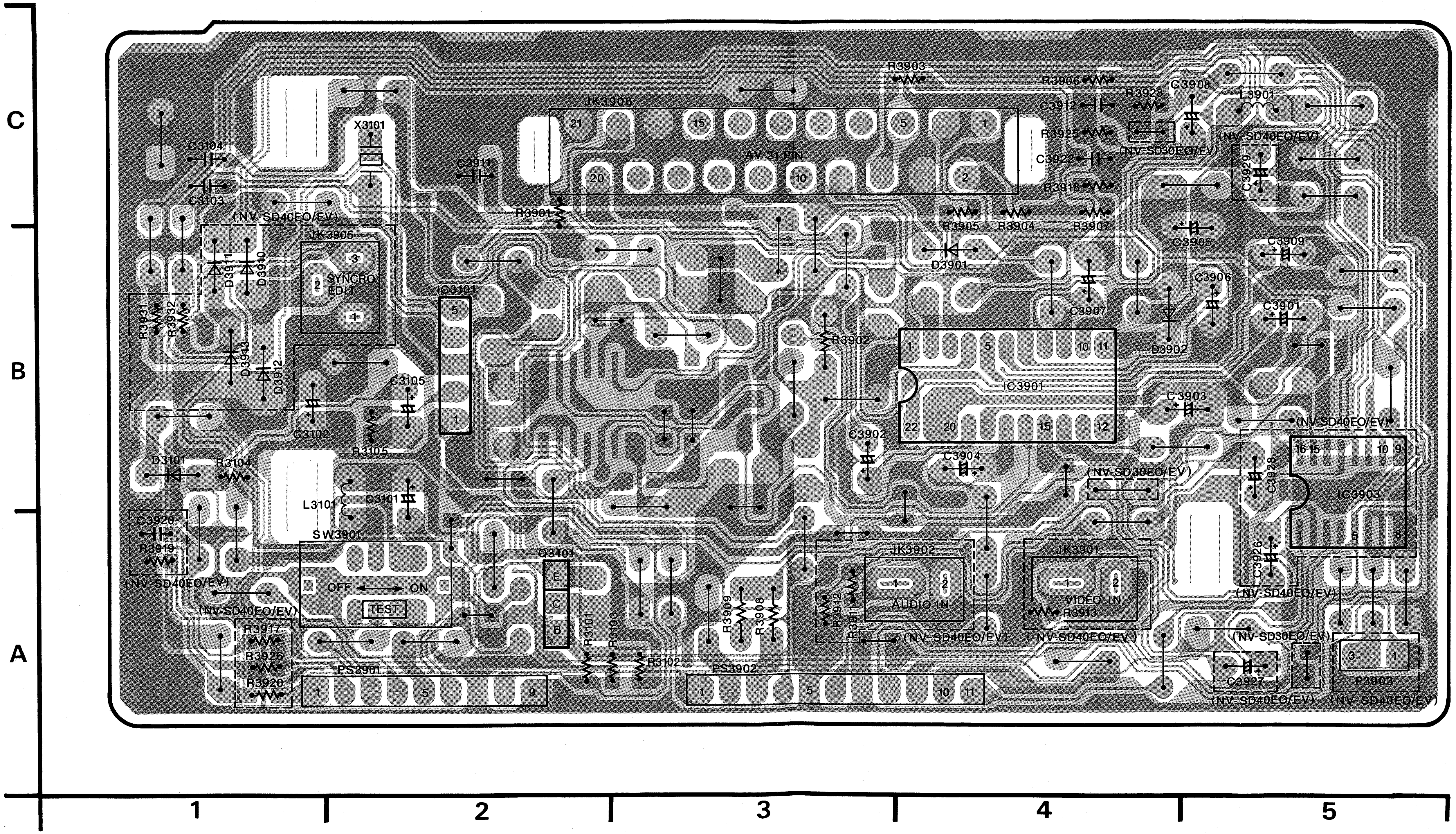
HEAD AMP C.B.A.	
Transistor	
Q502 Q503 Q504	B-2 B-2 B-1
Transistor & Resistor	
QR502	B-1
Integrated Circuit	
IC501	A-3
Test Point	
TP507 TP508	A-3 A-3
Adjustment	
VR501 VR502	A-1 A-2
Connector	
P501 PS202	A-1 B-3

ADDRESS INFORMATION

4-20. INPUT/OUTPUT PACK C.B.A. (VEP03973D: NV-SD30EO/EV) (VEP03973C: NV-SD40EO/EV)

INPUT/OUTPUT PACK C.B.A.	
Transistor	
Q3101	A-2
Integrated Circuit	
IC3101	B-2
IC3901	B-4
IC3903	B-5
Connector	
P3903	A-5
PS3901	A-2
PS3902	A-3

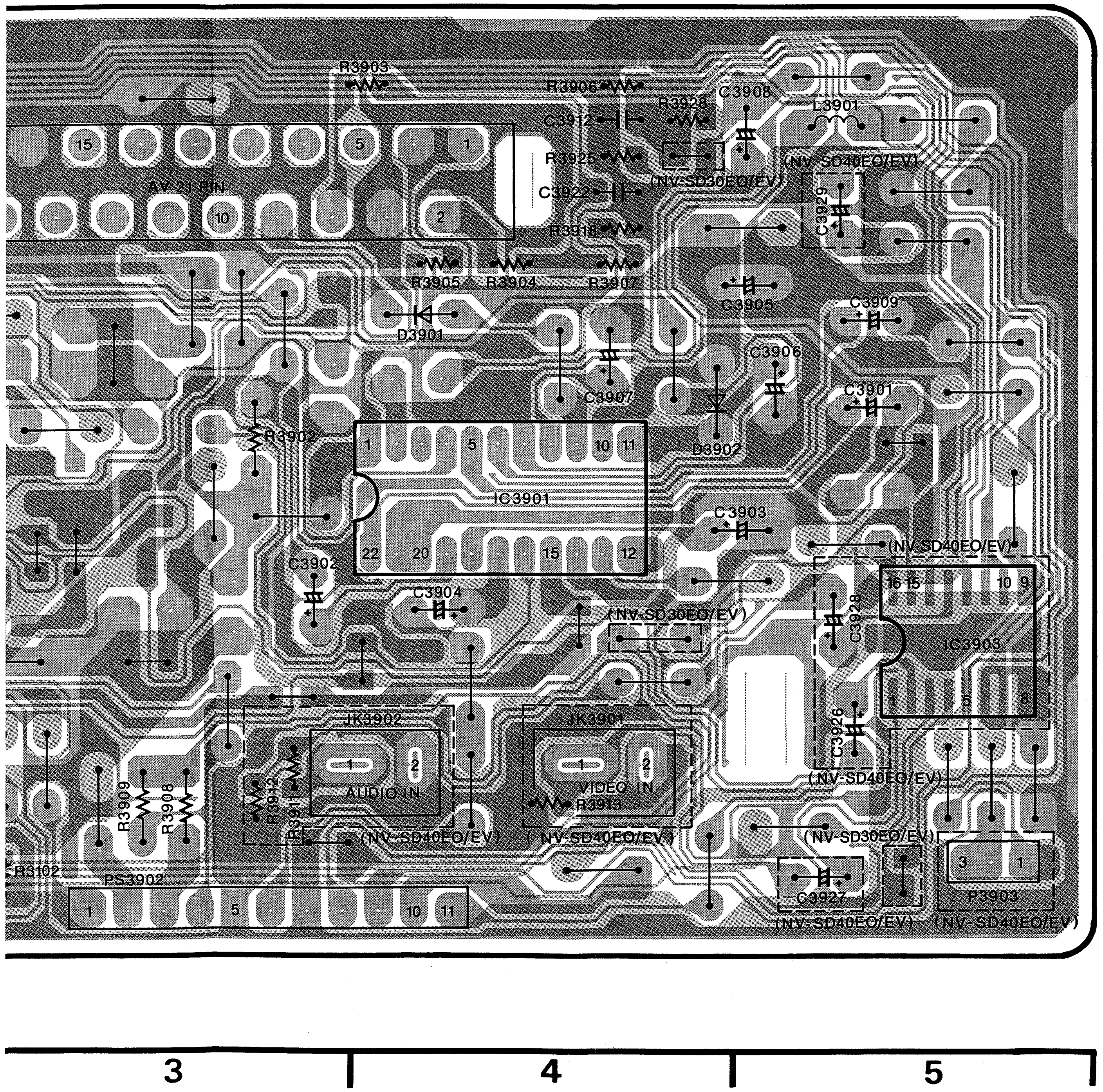
ADDRESS INFORMATION


C
B
A
1
2
3
4
5
JK3906
AV 21 PIN
21
15
5
1
20
10
2
X3101
C3104
C3103
C3911
R3901
R3903
R3906
R3928
C3908
C3912
L3901
R3925
(NV-SD30EO/EV)
(NV-SD40EO/EV)
C3922
C3929
R3918
R3905
R3904
R3907
C3905
D3901
C3909
C3906
C3907
C3901
D3902
JK3905
SYNCRO EDIT
3
2
1
D3911
D3910
R3931
R3932
D3913
D3912
IC3101
5
1
C3105
C3102
R3105
R3902
IC3901
1
5
10
11
22
20
15
12
C3903
C3902
C3904
IC3903
16
15
10
9
1
5
8
C3928
C3926
D3101
R3104
L3101
C3101
C3920
R3919
SW3901
OFF
ON
TEST
Q3101
E
C
B
R3101
R3103
R3102
R3917
R3926
R3920
PS3901
1
5
9
PS3902
1
5
10
11
R3909
R3908
JK3902
AUDIO IN
R3912
R3911
JK3901
VIDEO IN
R3913
C3927
P3903
3
1

O/EV) (VEP03973C: NV-SD40EO/EV)

INPUT/OUTPUT PACK C.B.A.	
Transistor	
Q3101	A-2
Integrated Circuit	
IC3101 IC3901 IC3903	B-2 B-4 B-5
Connector	
P3903 PS3901 PS3902	A-5 A-2 A-3

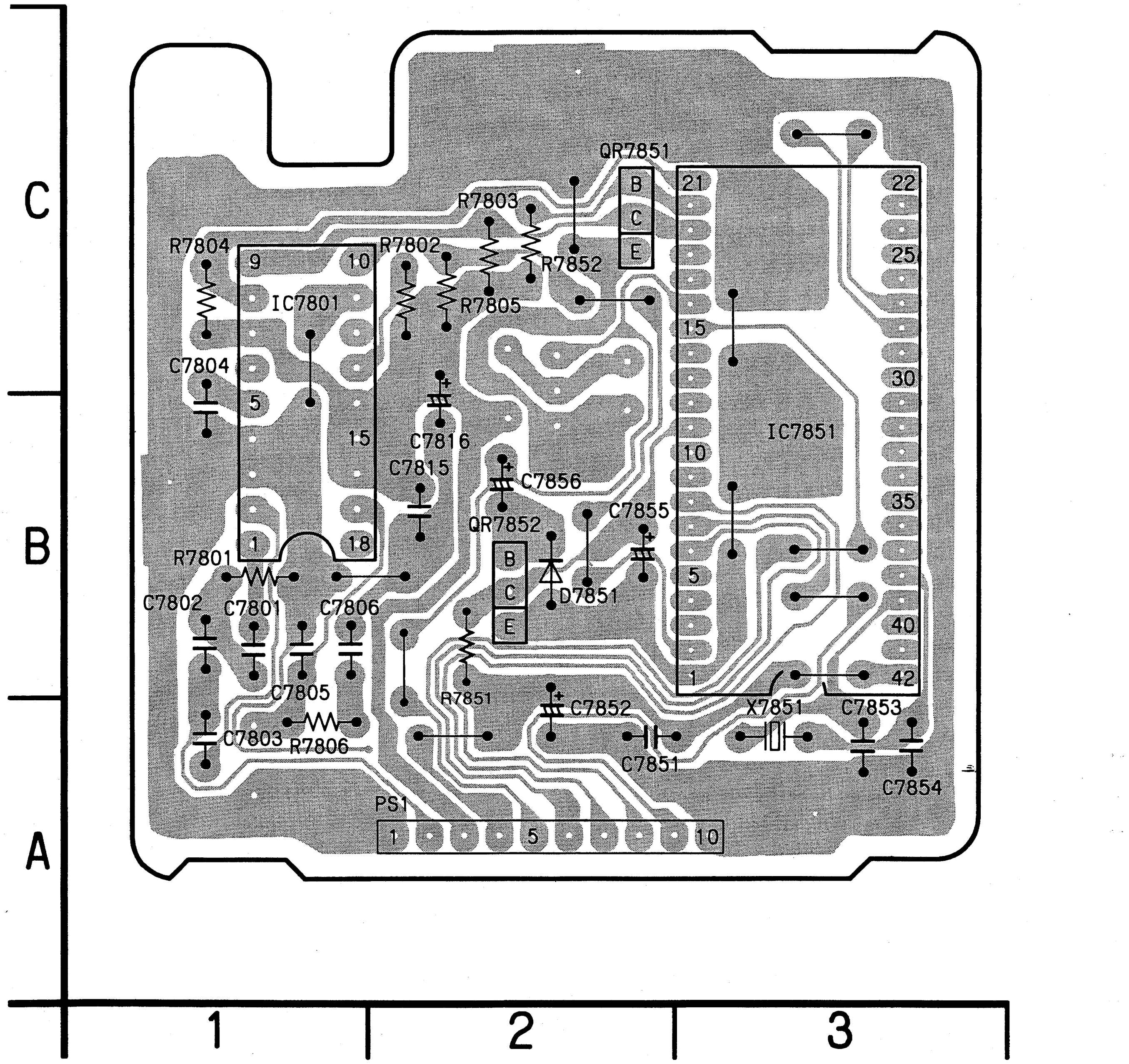
ADDRESS INFORMATION


R3903
R3906
R3928
C3908
L3901
C3912
R3925
C3922
(NV-SD30EO/EV)
(NV-SD40EO/EV)
AV 21 PIN
15
5
1
10
2
R3916
C3929
R3905
R3904
R3907
C3905
D3901
C3909
C3906
C3907
C3901
R3902
D3902
IC3901
1
5
10
11
22
20
15
12
C3903
(NV-SD40EO/EV)
C3902
C3904
(NV-SD30EO/EV)
C3928
IC3903
16
15
10
9
1
5
8
C3926
JK3902
AUDIO IN
JK3901
VIDEO IN
R3913
R3909
R3908
R3912
R3911
(NV-SD40EO/EV)
NV-SD40EO/EV)
(NV-SD30EO/EV)
R3102
PS3902
C3927
P3903
3
1
(NV-SD40EO/EV)
(NV-SD40EO/EV)
3
4
5

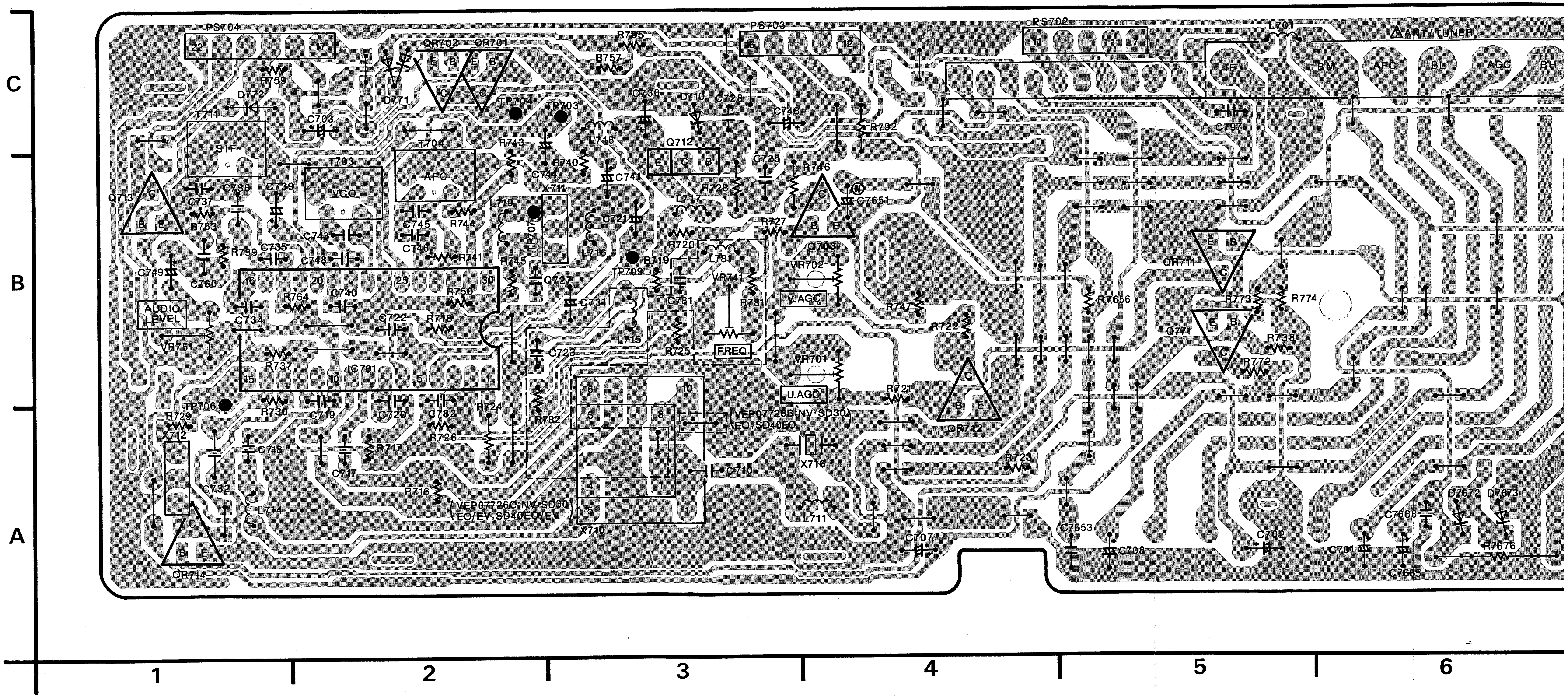
4-21. VPS PACK C.B.A. (VEP07538G: NV-SD30EV, SD40EV)

VPS PACK C.B.A.	
Transistor & Resistor	
QR7851 QR7852	C-2 B-2
Integrated Circuit	
IC7801 IC7851	C-1 B-3
Connector	
PS1	A-2

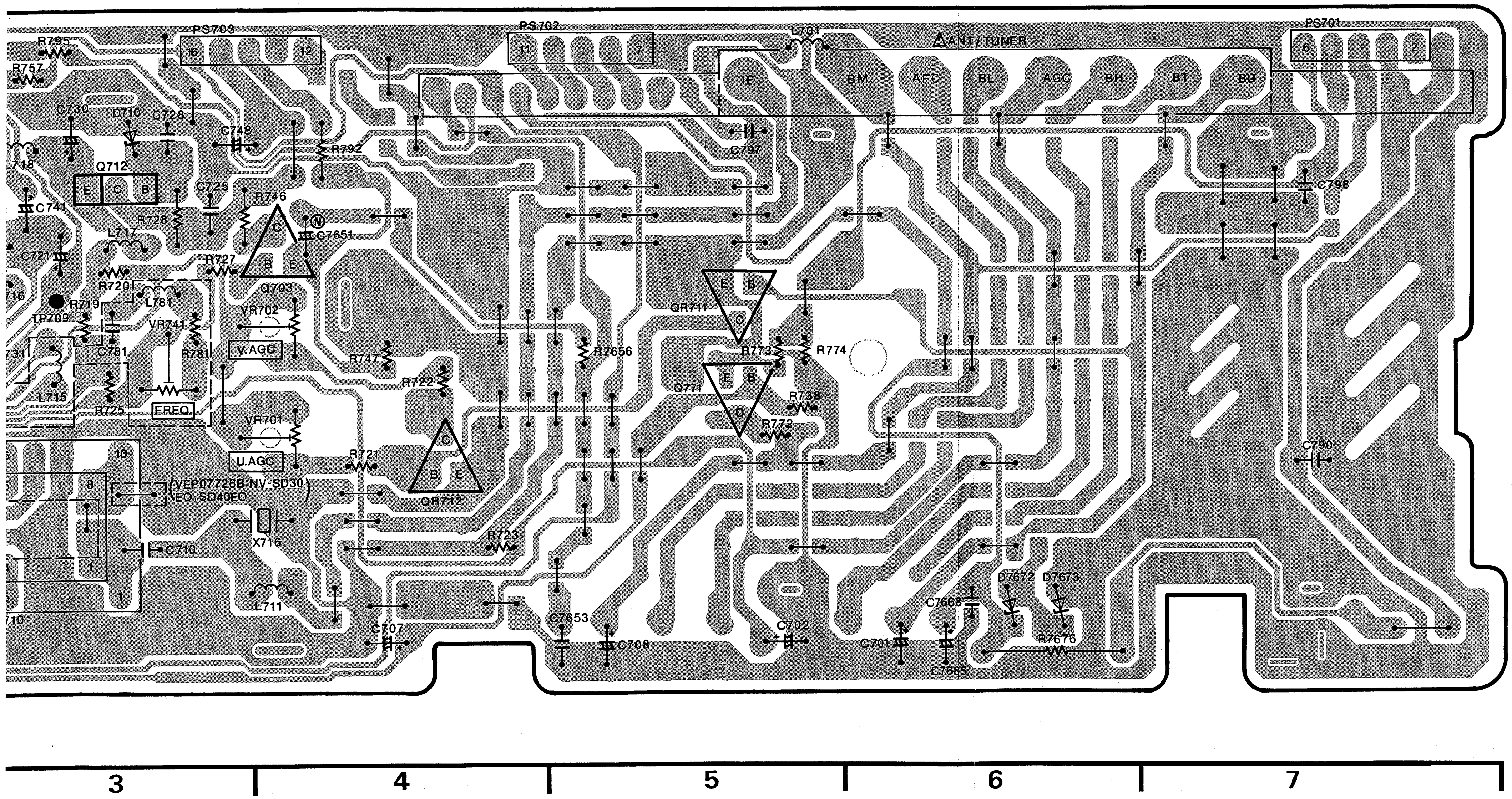
ADDRESS INFORMATION


C
B
A
QR7851
R7803
B
C
E
21
22
25
R7804
R7802
R7852
9
10
IC7801
R7805
15
C7804
30
5
15
C7816
IC7851
C7815
10
C7856
35
C7855
QR7852
1
18
R7801
B
C
D7851
5
C7802
C7801
C7806
E
40
C7805
R7851
1
42
X7851
C7853
C7852
C7803
R7806
C7851
C7854
PS1
1
5
10
1
2
3

4-22. TV DEMODULATOR PACK C.B.A. (VEP07726C: NV-SD30EO/EV, SD40EO/EV) (VEP07726B: NV-SD30EO, SD40EO)


C
B
A
1
2
3
4
5
6
PS704
22
17
QR702
QR701
E B E B
C C
D771
R759
D772
T711
SIF
C703
TP704
TP703
R795
R757
C730
D710
C728
PS703
16
12
C748
R792
PS702
11
7
L701
ANT/TUNER
IF
BM
AFC
BL
AGC
BH
C797
T704
AFC
T703
VCO
R743
C744
R740
L718
C741
Q712
E C B
C725
R746
R728
C7651
Q713
C737
C736
C739
R763
X711
L719
TP707
C745
R744
C743
C746
R741
C721
L716
L717
R727
Q703
C749
R739
C735
C748
R745
R720
L781
R719
TP709
VR702
V.AGC
VR741
R781
QR711
R773
R774
R7656
R747
R722
C760
16
20
25
30
R764
C740
R750
C727
C731
C781
AUDIO LEVEL
C734
C722
R718
VR751
R737
IC701
15
10
5
1
C723
L715
R725
FREQ.
VR701
U.AGC
Q771
R738
R772
QR712
R721
TP706
R729
X712
R730
C719
C720
C782
R724
R782
6
10
5
8
(VEP07726B:NV-SD30 EO,SD40EO)
X716
C718
R726
R717
C717
C732
L714
R716
(VEP07726C:NV-SD30 EO/EV,SD40EO/EV)
4
1
5
1
X710
C710
L711
R723
C7653
C708
C707
C702
C701
C7668
D7672
D7673
R7676
C7685
QR714

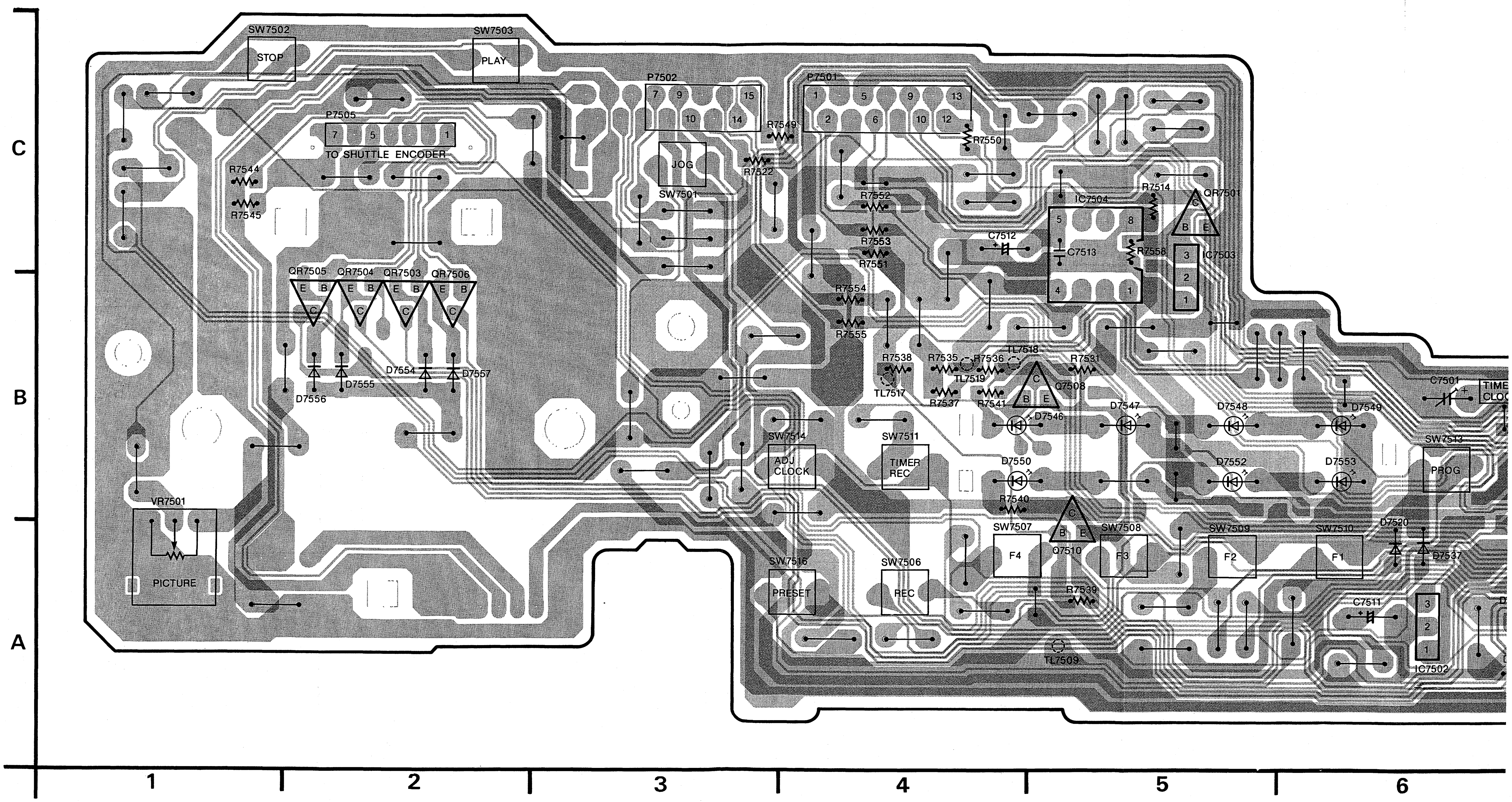
D30EO/EV, SD40EO/EV) (VEP07726B: NV-SD30EO, SD40EO)

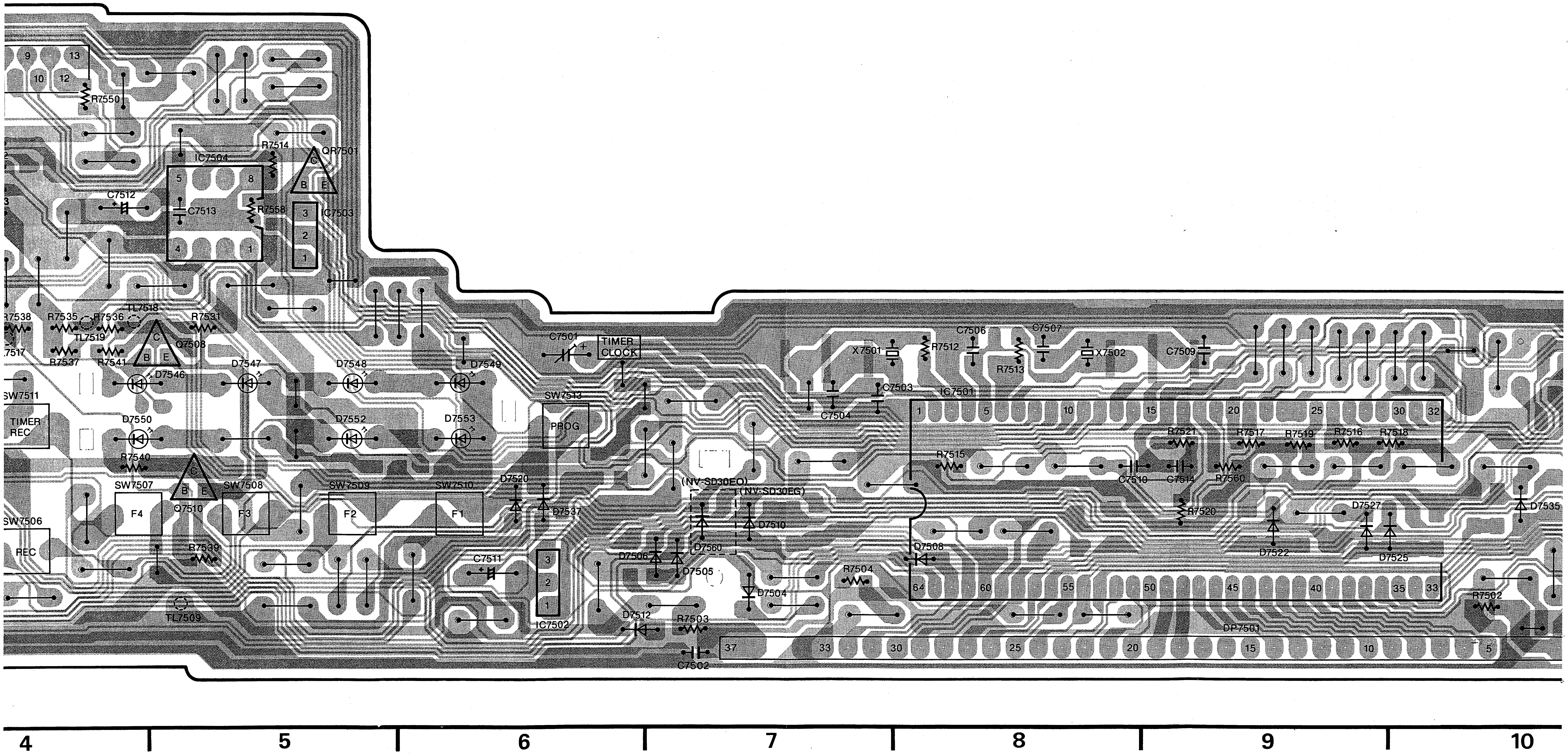

PS703
16
12
PS702
11
7
L701
ANT/TUNER
PS701
6
2
R795
R757
C730
D710
C728
C748
R792
C797
IF
BM
AFC
BL
AGC
BH
BT
BU
C798
L718
Q712
E
C
B
C725
R746
R728
C741
L717
C7651
N
C721
R727
Q703
R720
L781
R719
TP709
VR702
VR741
V.AGC
R781
R747
QR711
R7656
R773
R774
C781
731
L715
R725
FREQ.
R722
Q771
R738
R772
VR701
U.AGC
10
8
1
1
(VEP07726B:NV-SD30EO, SD40EO)
R721
QR712
X716
C710
R723
L711
C707
C7653
C708
C702
C701
C7685
C7668
D7672
D7673
R7676
C790
3
4
5
6
7

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q703	B-4
Q712	B-3
Q713	B-1
Q771	B-5
Transistor & Resistor	
QR701	C-2
QR702	C-2
QR711	B-5
QR712	A-4
QR714	A-1
Integrated Circuit	
IC701	B-2
Test Point	
TP703	C-3
TP704	C-2
TP706	B-1
TP707	B-2
TP709	B-3
Adjustment	
T703	B-2
T704	B-2
T711	C-1
VR701	B-4
VR702	B-4
VR741	B-3
VR751	B-1
Connector	
PS701	C-7
PS702	C-4
PS703	C-3
PS704	C-1

ADDRESS INFORMATION

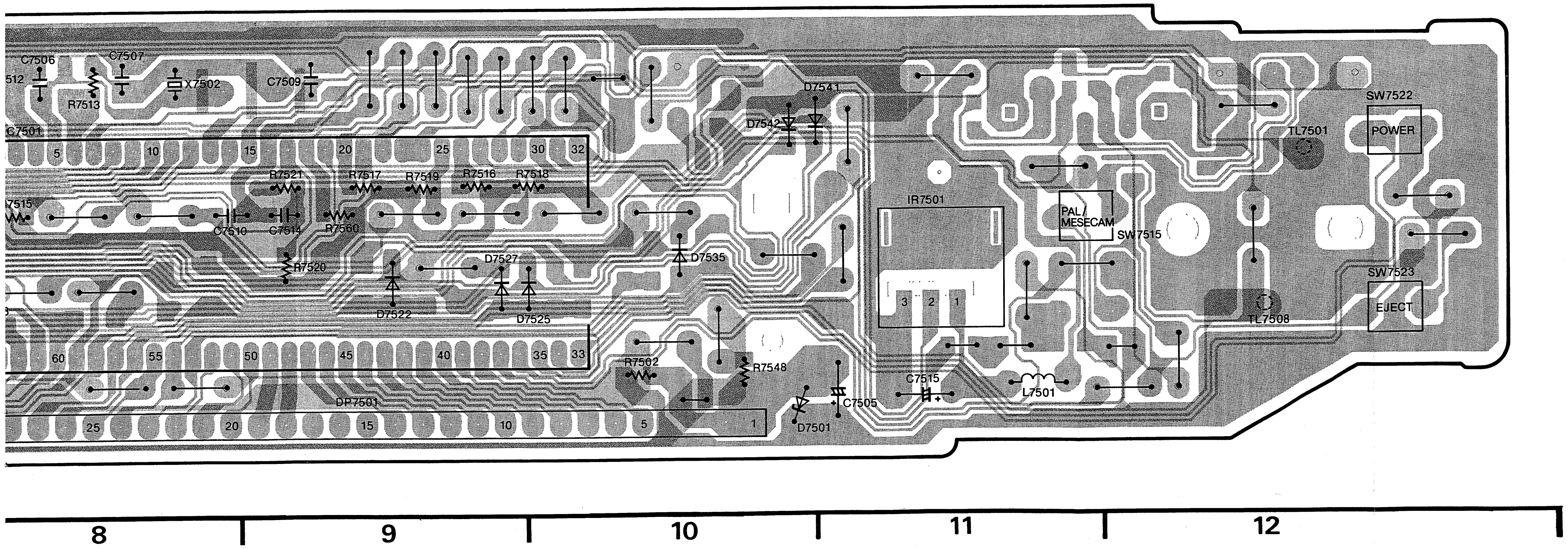
4-23. TIMER C.B.A. (VEP07701G: NV-SD30EO) (VEP07701J: NV-SD30EV)


SW7502
STOP
SW7503
PLAY
P7502
7
9
15
10
14
P7501
1
5
9
13
2
6
10
12
P7505
7
5
1
TO SHUTTLE ENCODER
R7544
R7545
JOG
SW7501
R7549
R7522
R7550
R7552
R7553
R7551
R7554
R7555
IC7504
C7512
C7513
R7558
R7514
QR7501
IC7503
QR7505
QR7504
QR7503
QR7506
E
B
C
D7556
D7555
D7554
D7557
R7538
TL7517
R7535
R7536
TL7518
TL7519
R7537
R7541
Q7508
R7531
D7546
D7547
D7548
D7549
C7501
TIME
CLOC
SW7514
ADJ CLOCK
SW7511
TIMER REC
D7550
D7552
D7553
SW7513
PROG
R7540
SW7507
F4
Q7510
SW7508
F3
SW7509
F2
SW7510
F1
D7520
D7537
SW7516
PRESET
SW7506
REC
R7539
TL7509
C7511
IC7502
VR7501
PICTURE
A
B
C
1
2
3
4
5
6


R7550
IC7504
R7514
QR7501
C7512
C7513
R7558
IC7503
R7538
R7535
R7536
TL7518
R7531
TL7519
Q7508
R7537
R7541
D7546
D7547
D7548
D7549
SW7511
TIMER REC
D7550
D7552
D7553
R7540
SW7507
SW7508
SW7509
SW7510
F4
F3
F2
F1
Q7510
SW7506
REC
R7539
TL7509
C7501
TIMER CLOCK
SW7513
PROG
D7520
D7537
C7511
IC7502
D7512
R7503
C7502
(NV-SD30EO)
(NV-SD30EG)
D7560
D7510
D7506
D7505
D7504
R7504
X7501
R7512
C7506
R7513
C7507
X7502
C7509
C7504
C7503
IC7501
R7521
R7517
R7519
R7516
R7518
R7515
C7510
C7514
R7560
R7520
D7508
D7522
D7527
D7525
D7535
R7502
DP7501
4
5
6
7
8
9
10

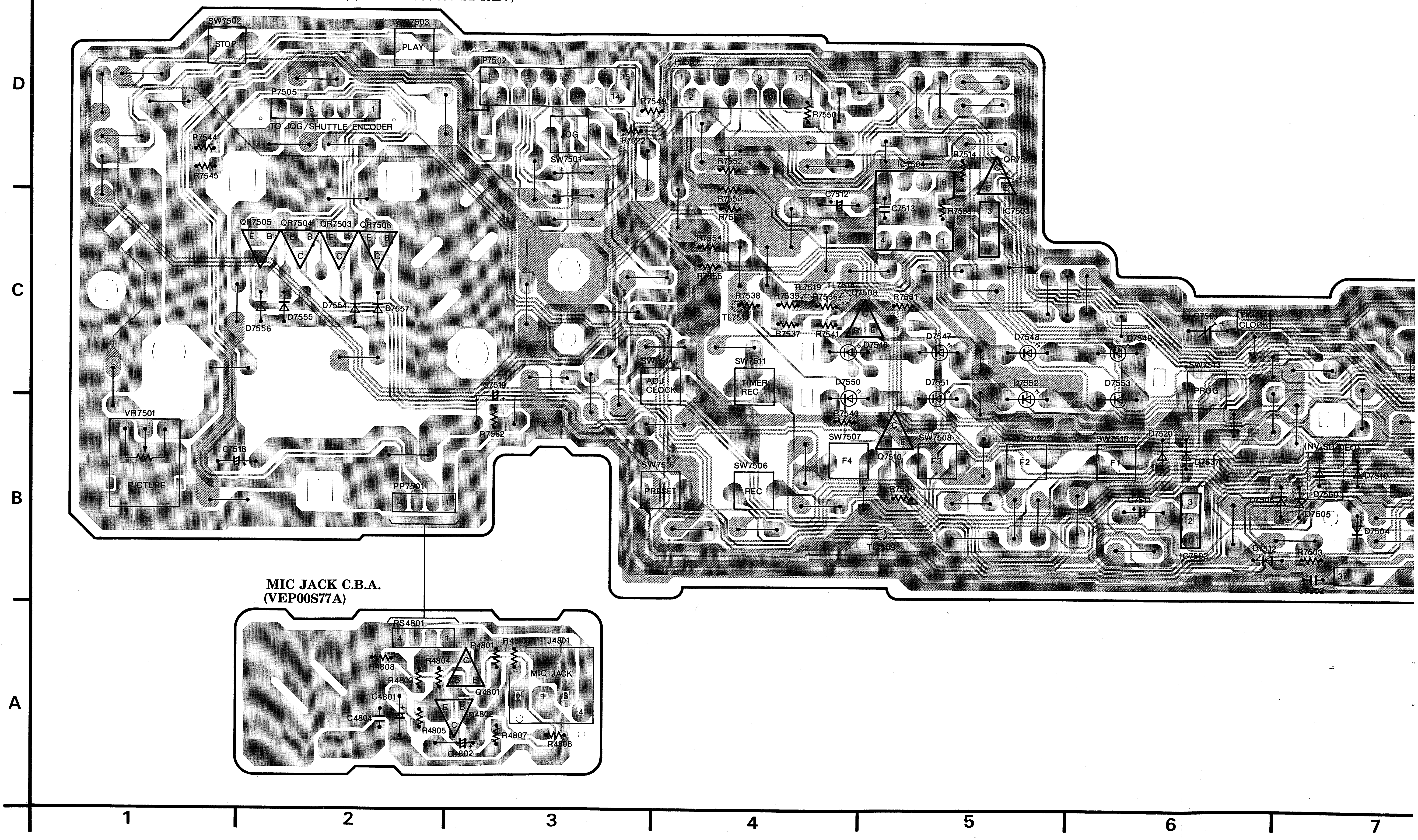
TIMER C.B.A.	
Transistor	
Q7508	B-5
Q7510	A-5
Transistor & Resistor	
QR7501	C-5
QR7503	B-2
QR7504	B-2
QR7505	B-2
QR7506	B-2
Integrated Circuit	
IC7501	B-8
IC7502	A-6
IC7503	C-5
IC7504	C-5
Test Point	
TL7501	B-12
TL7508	A-12
TL7509	A-5
TL7517	B-4
TL7518	B-4
TL7519	B-4
Adjustment	
C7501	B-6
Connector	
P7501	C-4
P7502	C-3
P7505	C-2

ADDRESS INFORMATION

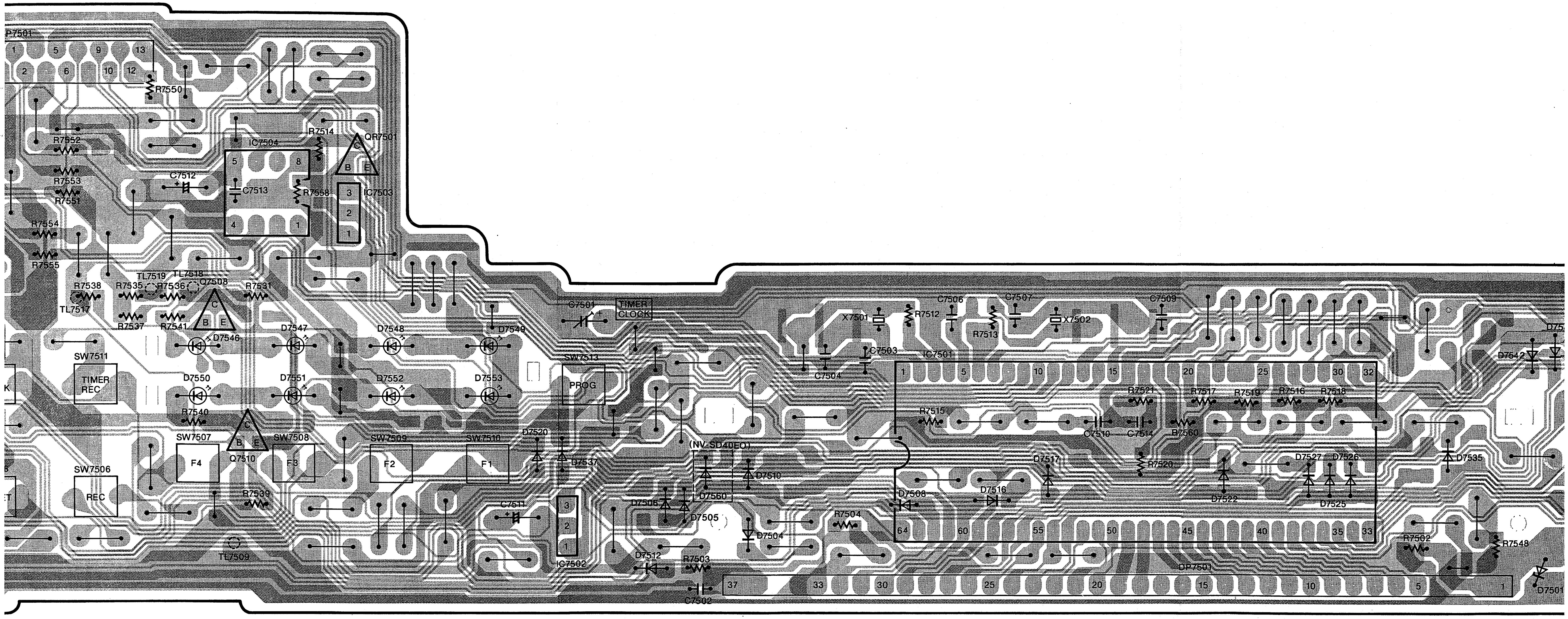

C7506
512
C7507
R7513
X7502
C7509
C7501
5
10
15
20
25
30
32
R7521
R7517
R7519
R7516
R7518
7515
C7510
C7514
R7560
R7520
D7527
D7522
D7525
D7535
D7541
D7542
IR7501
3
2
1
PAL/
MESECAM
SW7515
TL7501
SW7522
POWER
SW7523
EJECT
TL7508
60
55
50
45
40
35
33
R7502
R7548
C7515
L7501
C7505
D7501
DP7501
25
20
15
10
5
1
8
9
10
11
12

4-24. TIMER C.B.A. (VEP07699G: NV-SD40EO) (VEP07699J: NV-SD40EV) & OPERATION C.B.A. (VEP07716A: NV-SD40EO/EV)

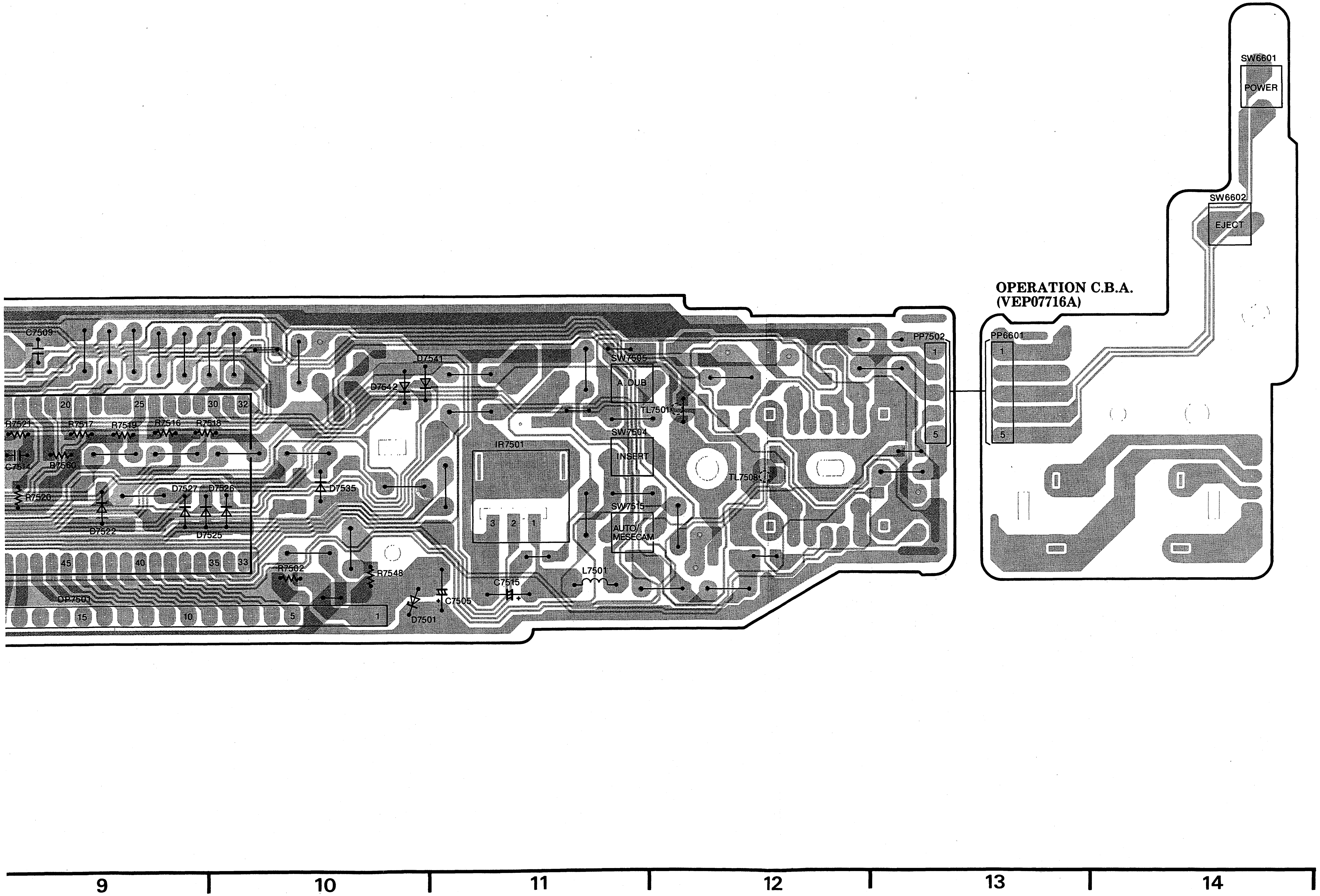
TIMER C.B.A. (VEP07699G: NV-SD40EO) (VEP07699J: NV-SD40EV)


D
C
B
A
1
2
3
4
5
6
7
SW7502
STOP
SW7503
PLAY
P7502
1 5 9 15
2 6 10 14
P7501
1 5 9 13
2 6 10 12
P7505
7 5 1
TO JOG/SHUTTLE ENCODER
R7544
R7545
R7549
R7522
R7550
JOG
SW7501
R7552
R7553
R7551
R7554
R7555
C7512
IC7504
5 8 4 1
C7513
R7514
QR7501
B E C
R7558
IC7503
3 2 1
QR7505
QR7504
QR7503
QR7506
E B C
D7556
D7555
D7554
D7557
R7538
TL7517
R7535
TL7519
R7536
TL7518
Q7508
R7531
R7537
R7541
D7546
D7547
D7548
D7549
C7501
TIMER CLOCK
SW7514
ADJ CLOCK
SW7511
TIMER REC
SW7513
PROG
D7550
D7551
D7552
D7553
R7540
C7519
R7562
VR7501
PICTURE
C7518
SW7507
F4
Q7510
SW7508
F3
SW7509
F2
SW7510
F1
D7520
D7537
(NV-SD40EO)
D7510
D7506
D7560
D7505
D7504
SW7515
PRESET
SW7506
REC
R7539
C7511
IC7502
3 2 1
D7512
R7503
C7502
37
TL7509
PP7501
4 1
MIC JACK C.B.A.
(VEP00S77A)
PS4801
4 1
R4801
R4802
J4801
R4808
R4804
R4803
Q4801
MIC JACK
2 1 3 4
C4801
C4804
R4805
Q4802
R4807
R4806
C4802

ERATION C.B.A. (VEP07716A: NV-SD40EO/EV)


DP7501
R7550
R7552
R7553
R7551
R7554
R7555
IC7504
C7512
C7513
R7514
R7558
QR7501
IC7503
R7538
TL7517
R7535
R7537
TL7519
R7536
TL7518
R7541
Q7508
R7531
D7546
D7547
D7548
D7549
SW7511
TIMER REC
D7550
D7551
D7552
D7553
R7540
SW7507
F4
Q7510
SW7508
F3
SW7509
F2
SW7510
F1
SW7506
REC
R7539
TL7509
C7501
TIMER CLOCK
SW7513
PROG
D7520
D7537
C7511
IC7502
(NV-SD40EO)
D7506
D7505
D7560
D7510
D7504
D7512
R7503
C7502
R7504
X7501
R7512
C7506
R7513
C7507
X7502
C7509
C7504
C7503
IC7501
R7515
R7521
R7517
R7519
R7516
R7518
C7510
C7514
R7560
R7520
D7517
D7508
D7516
D7522
D7527
D7526
D7525
D7535
D7542
R7502
R7548
D7501

4 | 5 | 6 | 7 | 8 | 9 | 10


OPERATION C.B.A.
(VEP07716A)
SW6601
POWER
SW6602
EJECT
PP6601
1
5
PP7502
1
5
C7509
20
25
30
32
R7521
R7517
R7549
R7516
R7518
C7514
R7550
R7520
D7522
D7527
D7526
D7525
D7535
D7541
D7542
45
40
35
33
R7502
R7548
DP7501
15
10
5
1
D7501
C7505
C7515
L7501
IR7501
3
2
1
SW7505
A. DUB
TL7501
SW7504
INSERT
TL7508
SW7515
AUTO
MESECAM
9
10
11
12
13
14

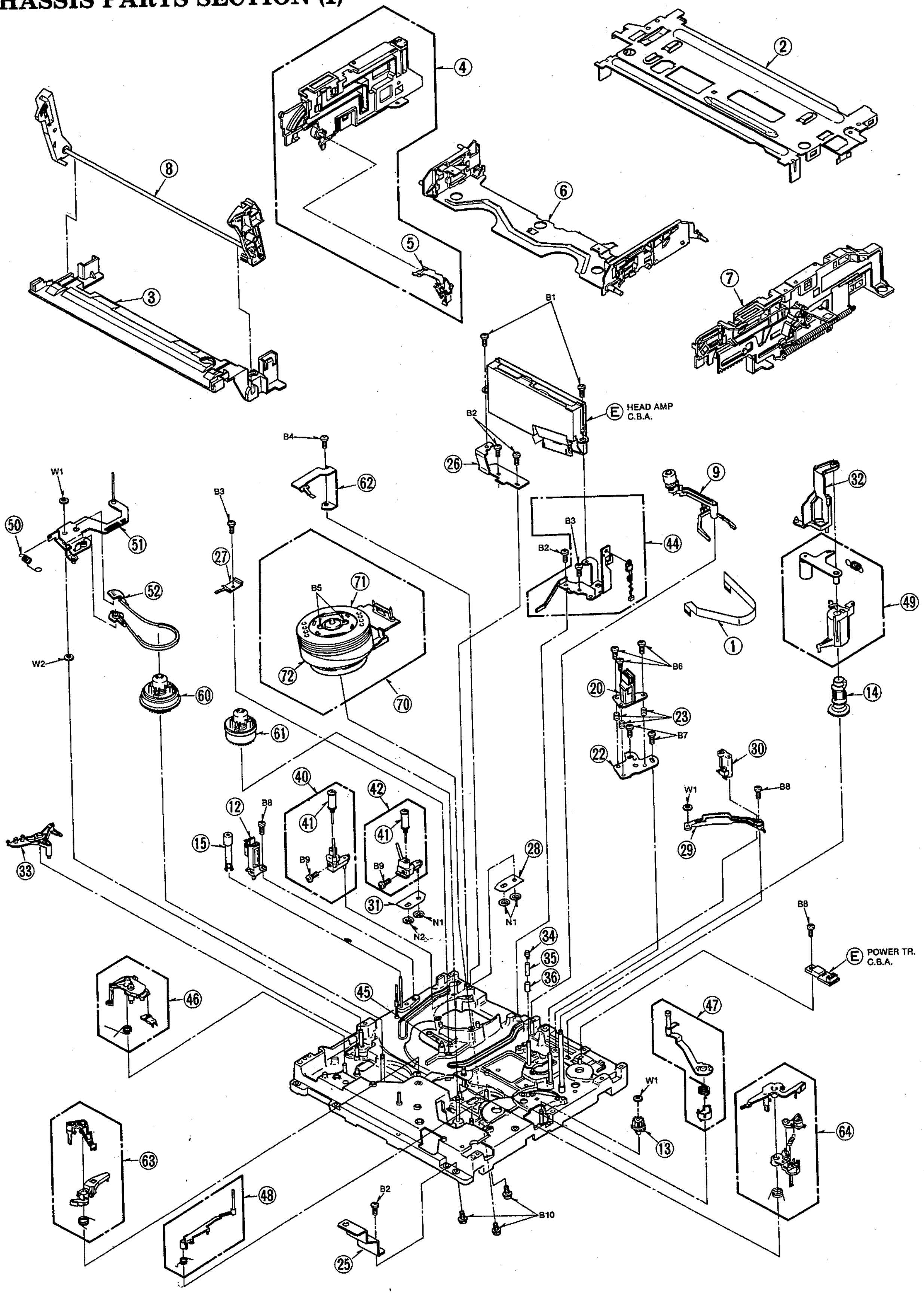
TIMER C.B.A.	
Transistor	
Q4801	A-3
Q4802	A-3
Q7508	C-5
Q7510	B-5
Transistor & Resistor	
QR7501	D-5
QR7503	C-2
QR7504	C-2
QR7505	C-2
QR7506	C-2
Integrated Circuit	
IC7501	C-8
IC7502	B-6
IC7503	C-5
IC7504	D-5
Test Point	
TL7501	C-12
TL7508	B-12
TL7509	B-5
TL7517	C-4
TL7518	C-4
TL7519	C-4
Adjustment	
C7501	C-6
Connector	
P7501	D-4
P7502	D-3
P7505	D-2
PP6601	C-13
PP7501	B-2
PP7502	C-13
PS4801	A-2

ADDRESS INFORMATION

SECTION 5
EXPLODED VIEWS & PARTS LIST

5-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST

❶ CHASSIS PARTS SECTION (1)



④
②
⑧
⑥
⑤
③
⑦
B1
Ⓔ HEAD AMP C.B.A.
B2
㉖
B4
(62)
W1
㊿
(51)
B3
㉗
⑨
㉜
B3
B2
㊹
B5
(71)
(52)
①
㊾
W2
(72)
(70)
B6
⑳
㉓
(60)
(61)
B7
㉒
⑭
㉚
㊵
㊷
W1
B8
⑫
B8
㊶
㊶
⑮
B9
B9
㉙
㉝
㉛
N1
N2
㉘
N1
B8
㉞
㉟
Ⓔ POWER TR. C.B.A.
㊱
㊺
㊻
㊼
W1
⑬
(64)
(63)
㊽
B2
B10
㉕

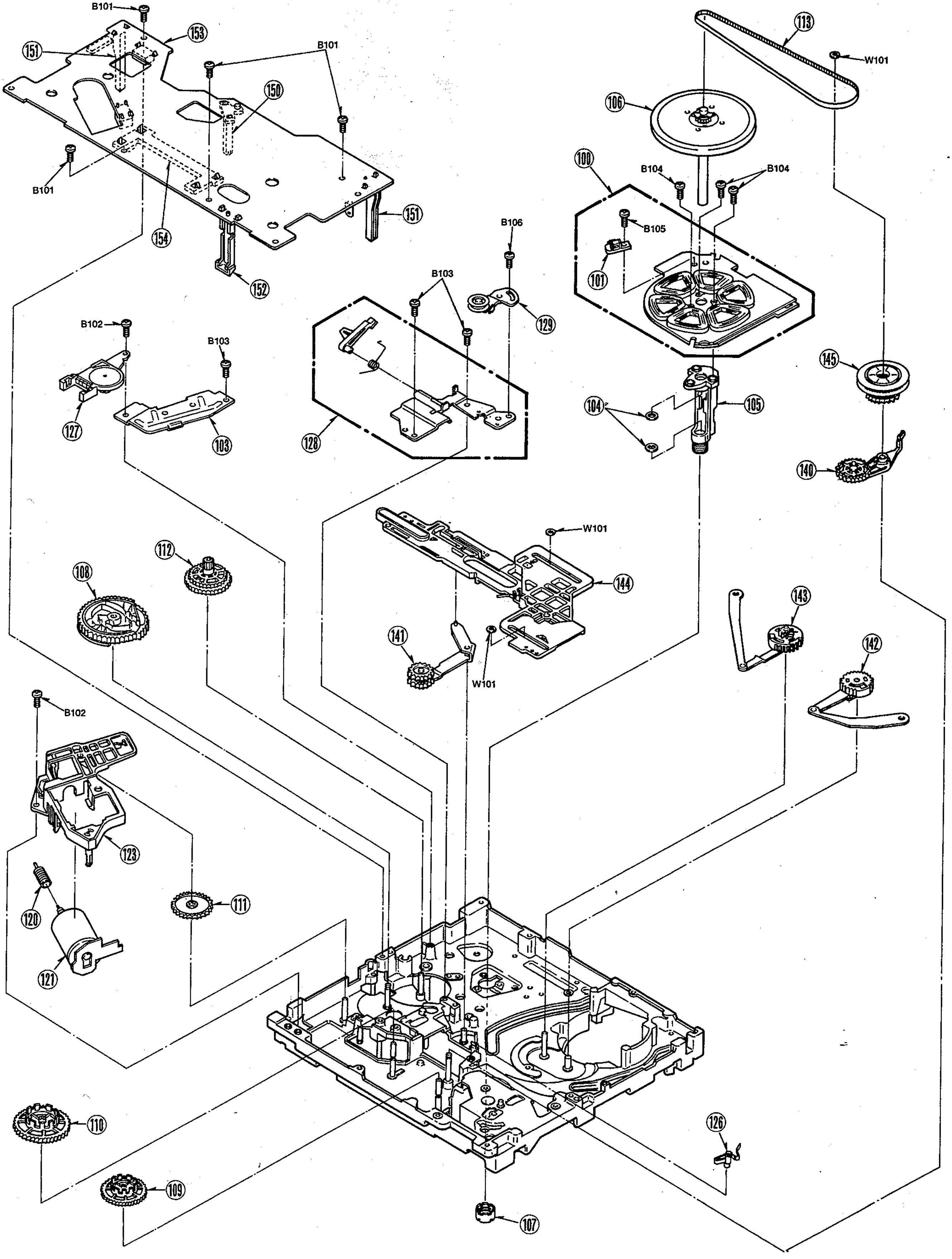
Note:1.* Be sure to make your orders of replacement parts according to this list.
2. *IMPORTANT SAFETY NOTICE*
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VWJ0653	FLEXIBLE CABLE (6P)	1	P4003-P1501
2(1)		VMA8644	TOP PLATE	1	
3(1)		VMA8787	CASSETTE GUIDE	1	
4(1)		VXA4660	SIDE PLATE (L) UNIT	1	
5(1)		VXL2250	OPENER LEVER UNIT	1	
6(1)		VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)		VXA4806	SIDE PLATE (R) UNIT	1	
8(1)		VXP1339	MAIN SHAFT UNIT	1	
9(1)		VXL2251	CLEANER ARM UNIT	1	
12(1)		VBS0050	FE HEAD	1	
13(1)		VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)		VDG0886	PINCH CAM GEAR	1	
15(1)		VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)		VED0205	A/C HEAD (1) UNIT	1	
22(1)		VMA8624	A/C HEAD BASE	1	
23(1)		VMB2515	A/C HEAD SPRING	3	
25(1)		VMA8761	MOUNT ANGLE	1	
26(1)		VMA8763	HEAD AMP MOUNT ANGLE (L)	1	
27(1)		VMC0917	EARTH SPRING	1	
28(1)		VMA8874	INCLIND BASE HOLDER (S)	1	
29(1)		VMD2078	P5 STOPPER BASE	1	
30(1)		VXA4927	P5 POST STOPPER	1	
31(1)		VMA8873	INCLIND BASE HOLDER (T)	1	
32(1)		VMD2101	OPENER PIECE	1	
33(1)		VML2776	TENSION SPRING ARM	1	
34(1)		VMX1544	P4 UPPER LIMITER	1	
35(1)		VMX2175	P4 SLEEVE	1	
36(1)		VMX2176	P4 LOWER LIMITER	1	
40(1)		VXA4982	INCLIND BASE (S) UNIT	1	
41(1)		VXP1415	ROLLER POST UNIT	2	
42(1)		VXA4984	INCLIND BASE (T) UNIT	1	
44(1)		VXA4974	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)		VMS5383	CASSETTE POSITION FIXTURE	1	
46(1)		VXL2310	REVIEW ARM UNIT	1	
47(1)		VXL2306	P5 ARM UNIT	1	
48(1)		VXL2243	TAKE UP TENSION REGULATOR ARM UNIT	1	
49(1)		VXL2246	PINCH ARM UNIT	1	
50(1)		VMB2434	TENSION SPRING	1	
51(1)		VXL2309	TENSION ARM (1) UNIT	1	
52(1)		VXZ0310	TENSION BAND UNIT	1	
60(1)		VXR0221	SUPPLY REEL TABLE UNIT	1	
61(1)		VXR0222	TAKE UP REEL TABLE UNIT	1	
62(1)		VXS0114	EARTH PLATE	1	
63(1)		VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64(1)		VXZ0313	TAKE UP BRAKE ARM UNIT	1	
70(1)		VEG1023	CYLINDER UNIT	1	NV-SD40EO/EV
70(1)		VEG1024	CYLINDER UNIT	1	NV-SD30EO/EV
71(1)		VEH0598	UPPER CYLINDER UNIT	1	NV-SD40EO/EV
71(1)		VEH0599	UPPER CYLINDER UNIT	1	NV-SD30EO/EV
72(1)		VJR0082	RT TERMINAL	1	
B1(1)		VHD0773	SCREW	2	
B2(1)		XTV26+6F	SCREW	4	
B3(1)		XTV26+4F	SCREW	2	
B4(1)		XTN3+6FFZ	SCREW	1	
B5(1)		VHD0425	SCREW	2	
B6(1)		VHD0762	SCREW	3	
B7(1)		XTV26+6FZ	SCREW	2	
B8(1)		XTV26+8F	SCREW	3	
B9(1)		VHD0760	SCREW	2	
B10(1)		VHD0342	SCREW	3	
N1(1)		VHN0192	NUT	3	
N2(1)		VHN0193	NUT	1	
W1(1)		VMX2208	WASHER	3	
W2(1)		XWGV26D5G	WASHER	1	

Note:1.* Be sure to make your orders of replacement parts according to this list.
2. *IMPORTANT SAFETY NOTICE*
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
100(2)		VEK5927	STATOR UNIT	1	
101(2)		VBK0061	FG HEAD	1	
103(2)		VMA8765	ROTOR STOPPER	1	
104(2)		VMX1927	OIL SEAL	2	
105(2)		VXD0140	HOUSING UNIT	1	
106(2)		VXP1350	ROTOR UNIT	1	
107(2)		VXQ0297	THRUST SCREW UNIT	1	
108(2)		VDG0913	MAIN CAM GEAR	1	
109(2)		VDG0861	SUPPLY REEL GEAR	1	
110(2)		VDG0862	TAKE UP REEL GEAR	1	
111(2)		VDG0868	WORM WHEEL GEAR	1	
112(2)		VDG0885	SUB CAM GEAR	1	
113(2)		VDV0235	TIMING BELT	1	
120(2)		VDG0866	WORM GEAR	1	
121(2)		VEM0427	LOADING MOTOR (1) UNIT	1	
123(2)		VMD1942	MOTOR BRACKET	1	
126(2)		VML2725	IDLER CONTROL LEVER	1	
127(2)		VSS0365	MODE SW	1	
128(2)		VXA4797	SS BRAKE BASE UNIT	1	
129(2)		VXA4799	TENSION ROLLER UNIT	1	
140(2)		VXL2229	IDLER ARM UNIT	1	
141(2)		VXL2230	DIRECT LEVER UNIT	1	
142(2)		VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)		VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)		VXL2307	MAIN LEVER UNIT	1	
145(2)		VXP1409	CENTRE CLUTCH	1	
150(2)		VMD1926	LED HOLDER	1	
151(2)		VMD1927	PHOTO TRANSISTOR HOLDER	2	
152(2)		VES0695	SAFETY TAB SW	1	
153(2)		VJB00S63	MECHANISM CONNECTION C.B.	1	ELECTRICAL PARTS ON THE C.B.A. IS LISTED ON ELECTRICAL PARTS LIST.
154(2)		VMD2029	REEL SHAFT GUIDE	1	
B101(2)		VHD0772	SCREW	4	
B102(2)		XTV26+8F	SCREW	2	
B103(2)		XTV26+6F	SCREW	3	
B104(2)		VHD0753	SCREW	3	
B105(2)		VHD0754	SCREW	1	
B106(2)		XSB26+4FZ	SCREW	1	
W101(2)		VMX2208	WASHER	3	

❷ CHASSIS PARTS SECTION (2)


B101
153
151
B101
150
B101
154
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152
113
W101
106
100
B104
B104
B105
101
B106
B103
129
B102
B103
127
103
128
145
104
105
140
W101
144
112
108
141
W101
143
142
B102
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121
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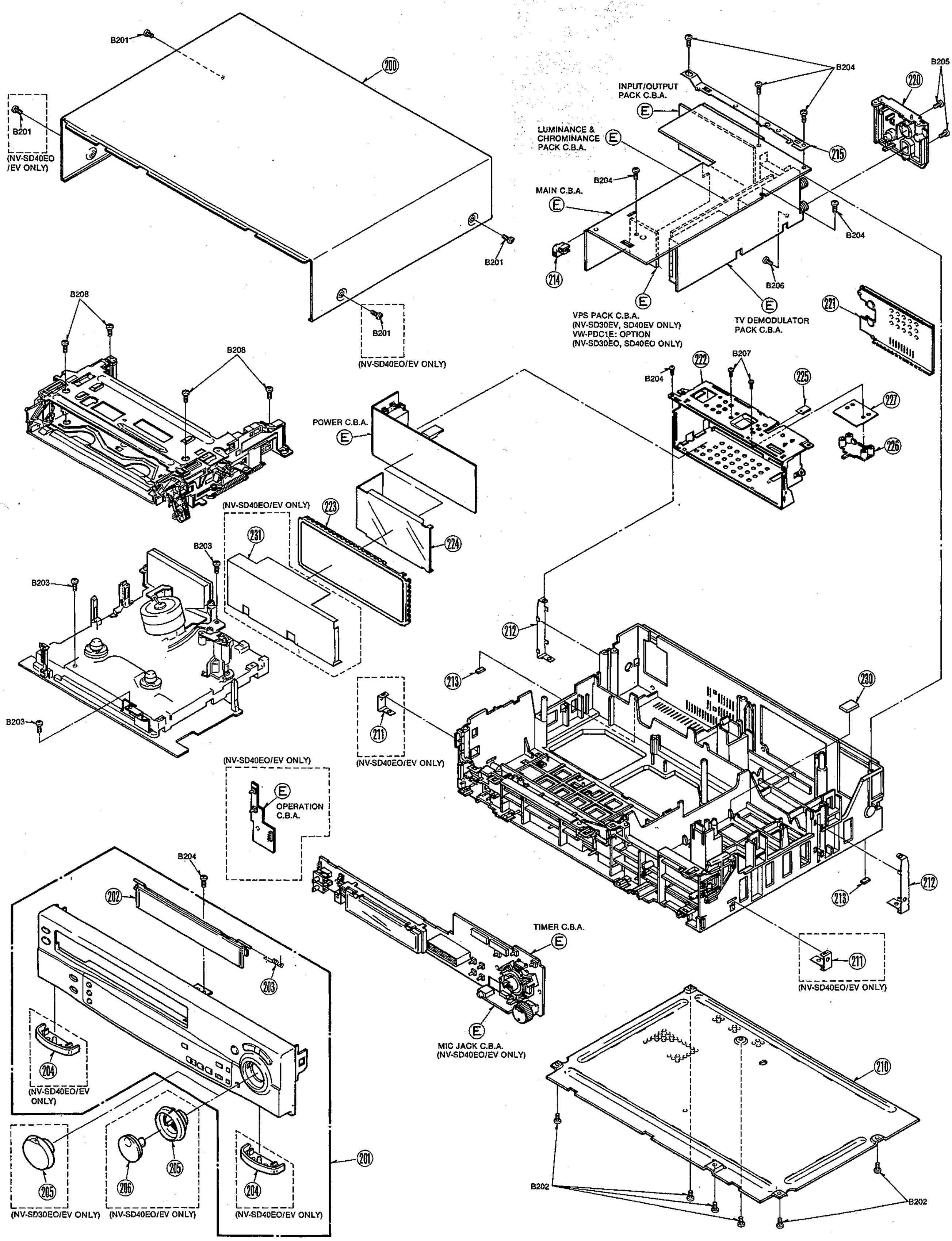
107

❸ CASING PARTS SECTION


B201
200
B201
(NV-SD40EO /EV ONLY)
B201
B201
(NV-SD40EO/EV ONLY)
B204
B205
220
INPUT/OUTPUT PACK C.B.A.
E
215
LUMINANCE & CHROMINANCE PACK C.B.A.
E
B204
MAIN C.B.A.
E
B204
214
B206
E
VPS PACK C.B.A. (NV-SD30EV, SD40EV ONLY) VW-PDC1E: OPTION (NV-SD30EO, SD40EO ONLY)
E
TV DEMODULATOR PACK C.B.A.
221
B208
B208
222
B207
225
B204
227
226
POWER C.B.A.
E
(NV-SD40EO/EV ONLY)
223
231
224
B203
B203
B203
212
213
211
(NV-SD40EO/EV ONLY)
230
(NV-SD40EO/EV ONLY)
E
OPERATION C.B.A.
B204
202
203
TIMER C.B.A.
E
212
213
211
(NV-SD40EO/EV ONLY)
E
MIC JACK C.B.A. (NV-SD40EO/EV ONLY)
210
204
(NV-SD40EO/EV ONLY)
201
205
206
205
204
(NV-SD30EO/EV ONLY)
(NV-SD40EO/EV ONLY)
(NV-SD40EO/EV ONLY)
B202
B202

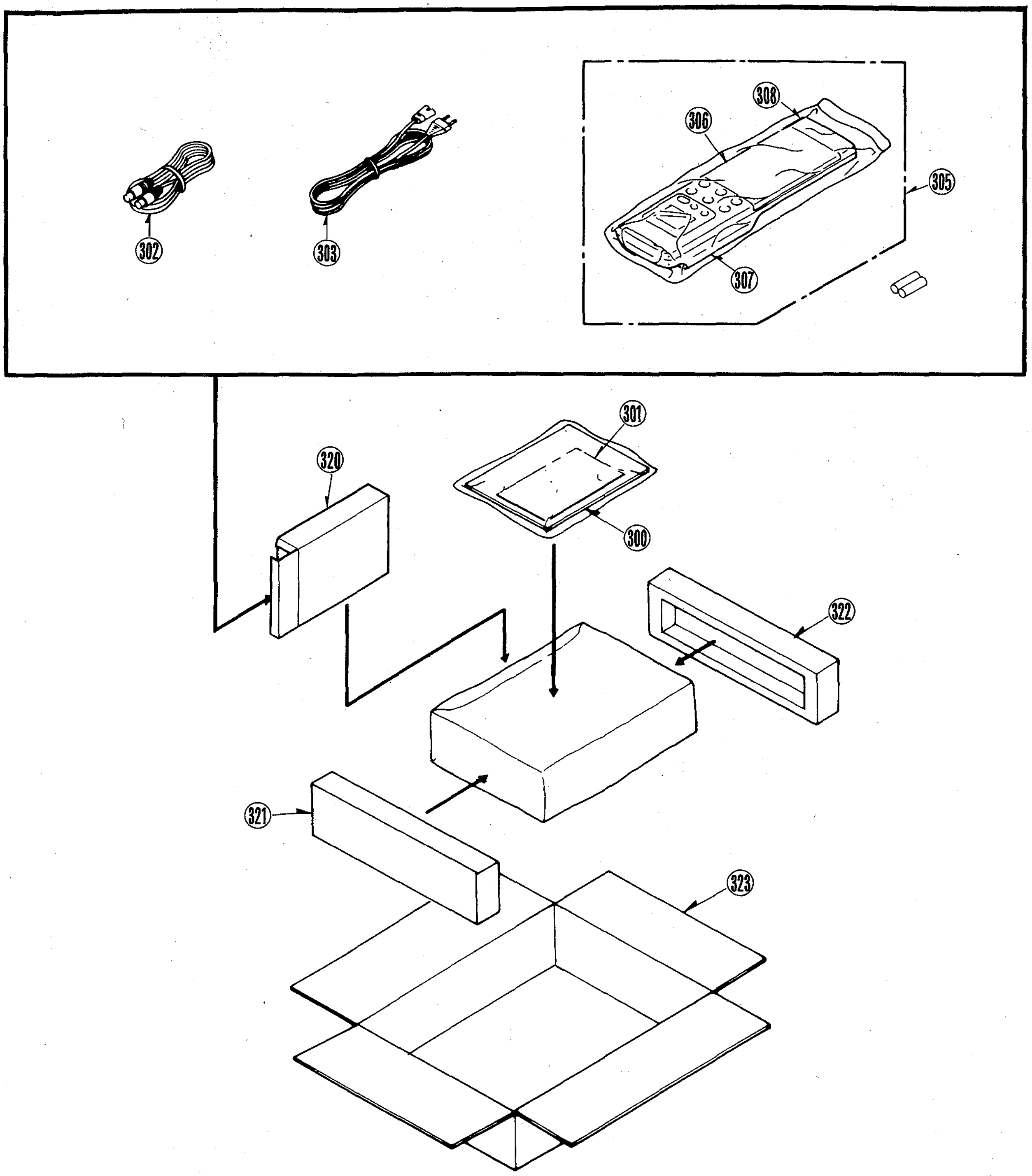
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
200(3)		VGM0974	TOP PANEL	1	NV-SD30EO/EV
200(3)		VGM0988	TOP PANEL	1	NV-SD40EO/EV
201(3)		VYP5255	FRONT PANEL UNIT	1	NV-SD30EO/EV
201(3)		VYP5253	FRONT PANEL UNIT	1	NV-SD40EO/EV
202(3)		VKF1978	BLINDER PANEL	1	
203(3)		VMB2521	BLINDER SPRING	1	
204(3)		VKA0153	LEG	1	NV-SD40EO/EV
205(3)		VGU6129	SHUTTLE KNOB	1	NV-SD30EO/EV
205(3)		VGU6124	SHUTTLE KNOB	1	NV-SD40EO/EV
206(3)		VXU1139	JOG NOB UNIT	1	NV-SD40EO/EV
210(3)		VKU0379	BOTTOM PLATE	1	
211(3)		VMP3821	SIDE ANGLE (F)	2	NV-SD40EO/EV
212(3)		VMP3940	SIDE ANGLE (R)	2	
213(3)		VKA0122	FOOT	2	
214(3)		VJF0374	MAIN C.B.A. HOLDER	1	
215(3)		VMP3939	EARTH ANGLE	1	
220(3)		VJH0683	RF ANT TERMINAL PLATE	1	
221(3)		VSC3110	POWER SHIELD COVER (TOP)	1	
222(3)		VXA4925	POWER SHIELD COVER (MAIN) U	1	
223(3)		VSC3375	POWER SHIELD COVER (BOTTOM)	1	
224(3)		VMZ1854	POWER BARRIER	1	
225(3)		VMC0357	TR. HOLDER SPRING	1	
226(3)		VGQ1377	TR. HOLDER	1	
227(3)		VMZ1224	INSULATION SHEET	1	
230(3)		VGQ0727	SPACER	1	
231(3)		VMZ2123	BARRIER	1	NV-SD40EO/EV
B201(3)		XTW3+10TFZ	SCREW	2	NV-SD30EO/EV
B201(3)		XTW3+10TFZ	SCREW	4	NV-SD40EO/EV
B202(3)		VHD0059	SCREW	6	
B203(3)		VHD0168	SCREW	3	
B204(3)		VHD0773	SCREW	7	
B205(3)		XTV3+12JFZ	SCREW	2	
B206(3)		XTV3+6F	SCREW	1	
B207(3)		XTV3+8G	SCREW	2	
B208(3)		XTV26+8FR	SCREW	4	

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
300(4)		VQT5197	OPERATING INSTRUCTIONS	1	<!>NV-SD30EO
			(ENGLISH/GERMAN/SPANISH)		
300(4)		VQT5200	OPERATING INSTRUCTIONS	1	<!>NV-SD30EO
			(SWEDISH/FINNISH/		
			PORTUGUESE)		
300(4)		VQT5199	OPERATING INSTRUCTIONS	1	<!>NV-SD30EO
			(ENGLISH/FRENCH/ITALIAN)		SUPPLIED FROM M.B.V.
300(4)		VQT5201	OPERATING INSTRUCTIONS	1	<!>NV-SD30EO
			(DUTCH/DENISH/GREEK)		SUPPLIED FROM M.B.V.
300(4)		VQT5198	OPERATING INSTRUCTIONS	1	<!>NV-SD30EV
			(GERMAN)		
300(4)		VQT5199	OPERATING INSTRUCTIONS	1	<!>NV-SD30EV
			(ENGLISH/FRENCH/ITALIAN)		
300(4)		VQT5212	OPERATING INSTRUCTIONS	1	<!>NV-SD40EO
			(ENGLISH/GERMAN/SPANISH)		
300(4)		VQT5215	OPERATING INSTRUCTIONS	1	<!>NV-SD40EO
			(SWEDISH/FINNISH/		
			PORTUGUESE)		
300(4)		VQT5214	OPERATING INSTRUCTIONS	1	<!>NV-SD40EO
			(ENGLISH/FRENCH/ITALIAN)		SUPPLIED FROM M.B.V.
300(4)		VQT5216	OPERATING INSTRUCTIONS	1	<!>NV-SD40EO
			(DUTCH/DENISH/GREEK)		SUPPLIED FROM M.B.V.
300(4)		VQT5213	OPERATING INSTRUCTIONS	1	<!>NV-SD40EV
			(GERMAN)		
300(4)		VQT5214	OPERATING INSTRUCTIONS	1	<!>NV-SD40EV
			(ENGLISH/FRENCH/ITALIAN)		
301(4)		VQC2119	PROGRAMME SHEET	1	
302(4)		VJA0376	DIN RF CABLE	1	
303(4)		VJA0664	AC CORD	1	<!>
305(4)		VEQ1473	REMOTE CONTROLLER	1	
			(BUILD IN DIGITAL SCANNER)		
306(4)		VGP3344	DOOR PANEL	1	
307(4)		VKF1977	BATTERY COVER	1	
308(4)		VGQ3046	CAP	1	
319(4)		VPN3639	PAD	1	NV-SD30EO,SD40EO
320(4)		VPK0825	ACCESSORIES PACKING	1	
321(4)		VPN3542	CUSHION (L)	1	
322(4)		VPN3543	CUSHION (R)	1	
323(4)		VPG6842	PACKING	1	NV-SD30EO
323(4)		VPG6856	PACKING	1	NV-SD30EO
					SUPPLIED FROM M.B.V.
323(4)		VPG6840	PACKING	1	NV-SD30EV
323(4)		VPG6845	PACKING	1	NV-SD40EO
323(4)		VPG6862	PACKING	1	NV-SD40EO
					SUPPLIED FROM M.B.V.
323(4)		VPG6844	PACKING	1	NV-SD40EV
			SERVICE FIXTURES & TOOLS		
		VFJ8125H3F	VHS ALIGNMENT TAPE(PAL)	1	
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0132	BACK TENSION METER	1	
		VFK0343	CHECK LIGHT	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0341	UPPER CYLINDER REMOVER	1	
		VFK0680	WHITE GREASE	1	
		VFK0851	CENTRE FIXING TOOL	1	
		VFK0330	FINE ADJUSTMENT GEAR DRIVER	1	

❹ PACKING PARTS SECTION


308
306
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307
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323

5-2. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE : Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3.Unless otherwise specified,
All resistors are in OHMS , K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.
4.The P.C.Board units marked width'■'show below the main assembled parts.
5.The marking(RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP03971Q	MAIN C.B.A.	1	(RTL)NV-SD30EO/EV
		VEP03971N	MAIN C.B.A.	1	(RTL)NV-SD30EO
					SUPPLIED FROM M.B.V.
		VEP03971P	MAIN C.B.A.	1	(RTL)NV-SD40EO/EV
		VEP03971M	MAIN C.B.A.	1	(RTL)NV-SD40EO
					SUPPLIED FROM M.B.V.
		VEP03973D	INPUT/OUTPUT PACK C.B.A.	1	(RTL)NV-SD30EO/EV
		VEP03973C	INPUT/OUTPUT PACK C.B.A.	1	(RTL)NV-SD40EO/EV
		VEP03975K	LUMINANCE & CHROMINANCE	1	(RTL)NV-SD30EO/EV
			PACK C.B.A.		
		VEP03A01CPE	LUMINANCE & CHROMINANCE	1	(RTL)NV-SD30EO
			PACK C.B.A.		SUPPLIED FROM M.B.V.
		VEP03975J	LUMINANCE & CHROMINANCE	1	(RTL)NV-SD40EO/EV
			PACK C.B.A.		
		VEP03A01FPE	LUMINANCE & CHROMINANCE	1	(RTL)NV-SD40EO
			PACK C.B.A.		SUPPLIED FROM M.B.V.
		VEP07538G	VPS C.B.A.	1	(RTL)
					NV-SD30EV,SD40EV
		VEP07726C	TV DEMODULATOR PACK C.B.A.	1	(RTL)NV-SD30EO/EV
					NV-SD40EO/EV
		VEP07726B	TV DEMODULATOR PACK C.B.A.	1	(RTL)
					NV-SD30EO,SD40EO
					SUPPLIED FROM M.B.V.
		VEP05180B	HEAD AMP C.B.A.	1	(RTL)NV-SD30EO/EV
		VEP05182APE	HEAD AMP C.B.A.	1	(RTL)NV-SD30EO
					SUPPLIED FROM M.B.V.
		VEP05180A	HEAD AMP C.B.A.	1	(RTL)NV-SD40EO/EV
		VEP05182BPE	HEAD AMP C.B.A.	1	(RTL)NV-SD40EO
					SUPPLIED FROM M.B.V.
		VEP07701G	TIMER C.B.A.	1	(RTL)NV-SD30EO
		VEP07701J	TIMER C.B.A.	1	(RTL)NV-SD30EV
		VEP07699G	TIMER C.B.A.	1	(RTL)NV-SD40EO
					INCLUDING THE MIC
					C.B.A.(VEP00S77A).
		VEP07699J	TIMER C.B.A.	1	(RTL)NV-SD40EV
					INCLUDING THE MIC
					C.B.A.(VEP00S77A).
		VEP00S77A	MIC C.B.A.	1	(RTL)NV-SD40EO/EV
					INCLUDED IN TIEMR
					C.B.A.(VEP07699G,J).
		VEP07716A	OPERATION C.B.A.	1	(RTL)NV-SD40EO/EV
		VEP01518J	POWER C.B.A.	1	(RTL)<!>
					NV-SD30EO,SD40EO
		VEP01518K	POWER C.B.A.	1	(RTL)<!>
					NV-SD30EV,SD40EV
		---------	MECHANISM CONNECTION C.B.A.	1	(RTL)
					NOT SUPPLIE AS
					C.B.A..(C.B. IS
					LISTED ON MECHANICAL
					PARTS LIST)
		VEP00S86A	POWER TRANSISTOR C.B.A.	1	(RTL)
		---------	MOTOR C.B.A.	1	(RTL)
					C.B.A IS INCLUDED
					IN LOADING MOTOR (1)
					UNIT. (VEM0427)
		ENC17984	RF CONVERTER	1	<!>
		ENV578B5H6	TUNER	1	<!>
F1101		VSF0107C16	FUSE	1	<!>
	■	VEP03971Q	MAIN C.B.A.		(RTL)NV-SD30EO/EV
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.01U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1332JZ	P.CAPACITOR 100V 4700P	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4037		ECKF1H562KB	C.CAPACITOR 50V 5600P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7002		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2003		1SS254	DIODE	1	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002		1SS254	DIODE	1	
D6002-05		1SS254	DIODE	4	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	(VT)
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE) 2P	1	
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		XRA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRRV	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L6701		ELESE101KA	COIL 100UH	1	
L7002,03		ELESQ101KA	COIL 100UH	2	
L7004		ELESQ1R0KA	COIL 1UH	1	
L7007		ELJFC1R0KB	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS1658	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002		VJS1657	CONNECTOR (FEMALE)	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
			CONNECTORS		
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP6707		VJP3043A010W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2003		MSB709	TRANSISTOR	1	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	(R,S)
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	(R,S)
Q4001		MSD602-R	TRANSISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2007		MRN2404	TRANSISTOR-RESISTOR	1	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001		MRN1404	TRANSISTOR-RESISTOR	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	TRANSISTOR-RESISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR6710		MRN2404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2027,28		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3043		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			TRANSFORMERS		
T4001		EIQ7QF014Q	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2019		EVNDXAA00B15	V.RESISTOR 100K	1	
VR3012		EVNDXAA00B52	V.RESISTOR 500	1	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0749	FLAT CARD CABLE	1	(P6501-P1505)
		VWJ15HW260MM	FLAT CARD CABLE	1	(P2501-P1507)
		VWJ10AW335MM	FLAT CARD CABLE	1	(P3001-P501)
		VWJ13HW105MM	FLAT CARD CABLE	1	(P1001-P1102)
		VWJ131W140BB	FLAT CARD CABLE	1	(P6001-P7501)
		VWJ090W140BB	FLAT CARD CABLE	1	(P6002-P7502)
		VEE8284	FLAT CARD CABLE	1	(P4002-FE HEAD)
		VEE8285	FLAT CARD CABLE	1	(P2503-P202)
		VEE8286	FLAT CARD CABLE	1	(P2502-P1508)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03971N	MAIN C.B.A.		(RTL)NV-SD30E0
					SUPPLIED FROM M.B.V.
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.01U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1332JZ	P.CAPACITOR 100V 4700P	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4037		ECKF1H562KB	C.CAPACITOR 50V 5600P	1	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7002		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2003		1SS254	DIODE	1	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002		1SS254	DIODE	1	
D6002-05		1SS254	DIODE	4	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	(VT)
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE) 2P	1	
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		XRA6439P	IC	1	
IC2503		LM358PS	IC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRRV	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L6701		ELESE101KA	COIL 100UH	1	
L7002,03		ELESQ101KA	COIL 100UH	2	
L7004		ELESQ1R0KA	COIL 1UH	1	
L7007		ELJFC1R0KB	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS1658	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002		VJS1657	CONNECTOR (FEMALE)	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
			CONNECTORS		
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP6707		VJP3043A010W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2003		MSB709	TRANSISTOR	1	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	(R,S)
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	(R,S)
Q4001		MSD602-R	TRANSISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2007		MRN2404	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001		MRN1404	TRANSISTOR-RESISTOR	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	TRANSISTOR-RESISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR6710		MRN2404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2027,28		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3043		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VREO034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VREO034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VREO034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			TRANSFORMERS		
T4001		EIQ7QF014Q	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2019		EVNDXAA00B15	V.RESISTOR 100K	1	
VR3012		EVNDXAA00B52	V.RESISTOR 500	1	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0749	FLAT CARD CABLE	1	(P6501-P1505)
		VWJ15HW260MM	FLAT CARD CABLE	1	(P2501-P1507)
		VWJ10AW335MM	FLAT CARD CABLE	1	(P3001-P501)
		VWJ13HW105MM	FLAT CARD CABLE	1	(P1001-P1102)
		VWJ131W140BB	FLAT CARD CABLE	1	(P6001-P7501)
		VWJ090W140BB	FLAT CARD CABLE	1	(P6002-P7502)
		VEE8284	FLAT CARD CABLE	1	(P4002-FE HEAD)
		VEE8285	FLAT CARD CABLE	1	(P2503-P202)
		VEE8286	FLAT CARD CABLE	1	(P2502-P1508)
	■	VEP03971P	MAIN C.B.A.		(RTL)NV-SD40E0/EV
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3015		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3016		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4002		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.01U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4017		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4020		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4021		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4036		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C4037		ECKF1H562KB	C.CAPACITOR 50V 5600P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7002		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2002-06		1SS254	DIODE	5	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002,03		1SS254	DIODE	2	
D6002-05		1SS254	DIODE	4	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	(VT)
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE) 2P	1	
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		XRA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRSA	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3006		ELESQ5R6KA	COIL 5.6UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L4003		ELESQ101KA	COIL 100UH	1	
L4004		VLQ0123	COIL	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L6701		ELESE101KA	COIL 100UH	1	
L7002,03		ELESQ101KA	COIL 100UH	2	
L7004		ELESQ1R0KA	COIL 1UH	1	
L7007		ELJFC1R0KB	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS3193E014A	CONNECTOR (FEMALE)	1	
P3903		VJS1230	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002		VJS3193E015A	CONNECTOR (FEMALE)	1	
P6004		VJP1230T	CONNECTOR (MALE) 3P	1	
P6004		VJS1230	CONNECTOR (FEMALE)	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP6707		VJP3043A010W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2001		MSD601	TRANSISTOR-RESISTOR	1	
Q2002,03		MSB709	TRANSISTOR	2	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	(R,S)
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	(R,S)
Q4001		MSD602-R	TRANSISTOR	1	
Q4002		2SB1378-R	TRANSISTOR	1	(R,S)
Q4004		2SD1991	TRANSISTOR	1	
Q4005		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2001		UN2116	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2006,07		MRN2404	TRANSISTOR-RESISTOR	2	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR2009		MRN2404	TRANSISTOR-RESISTOR	1	
QR2010		UN2210	TRANSISTOR-RESISTOR	1	
QR2013		MRN2404	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3007,08		DTC363EK	COMBI.TR-R	2	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR4004		DTC363EK	COMBI.TR-R	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	TRANSISTOR-RESISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR6710		MRN2404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R2005		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2011		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2014		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2019,20		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2025		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2026		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2029		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2040		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3025		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3041		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3043		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4005		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4016		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4017		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4019		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4031		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R4046		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
T4001		EIQ7QF013Q	TRANSFORMER	1	
T4002		EIQ7QF012Q	I.F. TRANSFORMER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2006		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2018,19		EVNDXAA00B15	V.RESISTOR 100K	2	
VR3012,13		EVNDXAA00B52	V.RESISTOR 500	2	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0749	FLAT CARD CABLE	1	(P6501-P1505)
		VWJ15HW260MM	FLAT CARD CABLE	1	(P2501-P1507)
		VWJ14AW335MM	FLAT CARD CABLE	1	(P3001-P501)
		VWJ13HW105MM	FLAT CARD CABLE	1	(P1001-P1102)
		VWJ131W140BB	FLAT CARD CABLE	1	(P6001-P7501)
		VWJ150W140BB	FLAT CARD CABLE	1	(P6002-P7502)
		VEE8471	FLAT CARD CABLE	1	(P6004-P3903)
		VEE8284	WIRE CABLE	1	(P4002-FE HEAD)
		VEE8285	WIRE CABLE	1	(P2503-P202)
		VEE8286	WIRE CABLE	1	(P2502-P1508)
	■	VEP03971M	MAIN C.B.A.		(RTL)NV-SD40E0
					SUPPLIED FROM M.B.V.
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3015		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3016		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4002		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.01U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4017		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4020		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4021		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4036		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C4037		ECKF1H562KB	C.CAPACITOR 50V 5600P	1	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7002		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2002-06		1SS254	DIODE	5	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002,03		1SS254	DIODE	2	
D6002-05		1SS254	DIODE	4	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	(VT)
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE) 2P	1	
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		XRA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRSA	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3006		ELESQ5R6KA	COIL 5.6UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L4003		ELESQ101KA	COIL 100UH	1	
L4004		VLQ0123	COIL	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L6701		ELESE101KA	COIL 100UH	1	
L7002,03		ELESQ101KA	COIL 100UH	2	
L7004		ELESQ1R0KA	COIL 1UH	1	
L7007		ELJFC1R0KB	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS3193E014A	CONNECTOR (FEMALE)	1	
P3903		VJS1230	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002		VJS3193E015A	CONNECTOR (FEMALE)	1	
P6004		VJP1230T	CONNECTOR (MALE) 3P	1	
P6004		VJS1230	CONNECTOR (FEMALE)	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP6707		VJP3043A010W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2001		MSD601	TRANSISTOR-RESISTOR	1	
Q2002,03		MSB709	TRANSISTOR	2	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	(R,S)
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	(R,S)
Q4001		MSD602-R	TRANSISTOR	1	
Q4002		2SB1378-R	TRANSISTOR	1	(R,S)
Q4004		2SD1991	TRANSISTOR	1	
Q4005		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2001		UN2116	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2006,07		MRN2404	TRANSISTOR-RESISTOR	2	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR2009		MRN2404	TRANSISTOR-RESISTOR	1	
QR2010		UN2210	TRANSISTOR-RESISTOR	1	
QR2013		MRN2404	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3007,08		DTC363EK	COMBI.TR-R	2	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR4004		DTC363EK	COMBI.TR-R	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	TRANSISTOR-RESISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR6710		MRN2404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R2005		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2011		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2014		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2019,20		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2025		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2026		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2029		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2040		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3025		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3041		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3043		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4005		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4016		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4017		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4019		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4031		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R4046		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			TRANSFORMERS		
T4001		EIQ7QF013Q	TRANSFORMER	1	
T4002		EIQ7QF012Q	I.F. TRANSFORMER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2006		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2018,19		EVNDXAA00B15	V.RESISTOR 100K	2	
VR3012,13		EVNDXAA00B52	V.RESISTOR 500	2	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0749	FLAT CARD CABLE	1	(P6501-P1505)
		VWJ15HW260MM	FLAT CARD CABLE	1	(P2501-P1507)
		VWJ14AW335MM	FLAT CARD CABLE	1	(P3001-P501)
		VWJ13HW105MM	FLAT CARD CABLE	1	(P1001-P1102)
		VWJ131W140BB	FLAT CARD CABLE	1	(P6001-P7501)
		VWJ150W140BB	FLAT CARD CABLE	1	(P6002-P7502)
		VEE8471	FLAT CARD CABLE	1	(P6004-P3903)
		VEE8284	WIRE CABLE	1	(P4002-FE HEAD)
		VEE8285	WIRE CABLE	1	(P2503-P202)
		VEE8286	WIRE CABLE	1	(P2502-P1508)
	■	VEP03973D	INPUT/OUTPUT PACK C.B.A.		(RTL)NV-SD30E0/EV
			CAPACITORS		
C3101,02		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C3103,04		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	
C3105		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3901,02		ECEA1CK330	E.CAPACITOR 16V 33U	2	
C3903		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3904-06		ECEA1CK470	E.CAPACITOR 16V 47U	3	
C3907,08		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C3909		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C3911		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3912		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C3922		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
			DIODES		
D3101		1SS254	DIODE	1	
D3901,02		1SS254	DIODE	2	
			INTEGRATED CIRCUITS		
IC3101		BA7004	IC	1	
IC3901		LA7150	IC	1	
			CONNECTORS		
JK3906		VJS1469	CONNECTOR (FEMALE)	1	
			COILS		
L3101		ELESQ101KA	COIL 100UH	1	
L3901		ELESQ2R7KA	COIL 2.7UH	1	
			CONNECTORS		
PS3901		VJS3043F009W	CONNECTOR (FEMALE)	1	
PS3902		VJS3043F011W	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			TRANSISTORS		
Q3101		2SC3311	TRANSISTOR	1	
			RESISTORS		
R3101		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3102		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3103,04		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R3105		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3901		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3902		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3903,04		ERJ6GEYJ242	M.RESISTOR CH 1/10W 2.4K	2	
R3905		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R3906		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3907		ERJ6GEYJ912	M.RESISTOR CH 1/10W 9.1K	1	
R3908,09		ERDS2TJ151	C.RESISTOR 1/4W 150	2	
R3918		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R3925		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3928		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
			SWITCHES		
SW3901		ESD172211	SWITCH	1	
			CRYSTAL OSCILLATORS		
X3101		VSX0099	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VEJ1336	JACK PLATE	1	
	■	VEP03973C	INPUT/OUTPUT PACK C.B.A.		(RTL)NV-SD40E0/EV
			CAPACITORS		
C3101,02		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C3103,04		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	
C3105		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3901,02		ECEA1CK330	E.CAPACITOR 16V 33U	2	
C3903		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3904-06		ECEA1CK470	E.CAPACITOR 16V 47U	3	
C3907,08		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C3909		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C3911		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3912		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C3920		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C3922		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3926-28		ECEA1CK100	E.CAPACITOR 16V 10U	3	
C3929		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
			DIODES		
D3101		1SS254	DIODE	1	
D3901,02		1SS254	DIODE	2	
D3910-13		MA165VT	DIODE	4	
			INTEGRATED CIRCUITS		
IC3101		BA7004	IC	1	
IC3901		LA7150	IC	1	
IC3903		UPD4053BG	IC	1	
			CONNECTORS		
JK3906		VJS1469	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COILS		
L3101		ELESQ101KA	COIL 100UH	1	
L3901		ELESQ2R7KA	COIL 2.7UH	1	
			CONNECTORS		
P3903		VJP1243	CONNECTOR (MALE) 3P	1	
PS3901		VJS3043F009W	CONNECTOR (FEMALE)	1	
PS3902		VJS3043F011W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q3101		2SC3311	TRANSISTOR	1	
			RESISTORS		
R3101		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3102		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3103,04		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R3105		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3901		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3902		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3903,04		ERJ6GEYJ242	M.RESISTOR CH 1/10W 2.4K	2	
R3905		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R3906		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3907		ERJ6GEYJ912	M.RESISTOR CH 1/10W 9.1K	1	
R3908,09		ERDS2TJ151	C.RESISTOR 1/4W 150	2	
R3911		ERJ6GEYJ433	M.RESISTOR CH 1/10W 43K	1	
R3912		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3913		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3917		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3918		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R3919		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3920		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R3925		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3926		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3928		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R3931,32		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
			SWITCHES		
SW3901		ESD172211	SWITCH	1	
			CRYSTAL OSCILLATORS		
X3101		VSX0099	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VEJ1338	JACK PLATE	1	
	■	VEP03975K	LUMINANCE & CHROMINANCE		(RTL)NV-SD30EO/EV
			PACK C.B.A.		
			CAPACITORS		
C305		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C306,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C308		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C309		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C310		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C311		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C312		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C313,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C315		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C320		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C805		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C807		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C808		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C809		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C812		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C838		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C839		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C841		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C842		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C843		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C845		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C846		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
			DIODES		
D302		1SS283	DIODE	1	
D304		1SS254	DIODE	1	
D801,02		1SS254	DIODE	2	
			DELAY LINES		
DL801		VLD0147	DELAY LINE	1	
			INTEGRATED CIRCUITS		
IC301		VEFH29B	IC	1	
			COILS		
L303		ELESQ220KA	COIL 22UH	1	
L304		ELESQ101KA	COIL 100UH	1	
L305		ELESP121JA	COIL 120UH	1	
L306		ELESQ390KA	COIL 39UH	1	
L803		ELESQ220KA	COIL 22UH	1	
L804		ELESQ101KA	COIL 100UH	1	
L805		ELESQ270KA	COIL 27UH	1	
L807		VLQ0540J150	COIL 15UH	1	
L811,12		ELESQ101KA	COIL 100UH	2	
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			COMBINATION PARTS		
QR805		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R304		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R307		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R308		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R310		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R315		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R316		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R318,19		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R322		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R327		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R813		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R814		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R815		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R816		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R817		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R827		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R828		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R848		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R849		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R853		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R855		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R857		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R859		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
	■	VEP03A01CPE	LUMINANCE & CHROMINANCE		(RTL)NV-SD30E0
			PACK C.B.A.		SUPPLIED FROM M.B.V.
			CAPACITORS		
C301		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C302		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C303,04		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C305,06		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	2	
C307		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C308		ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C309		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C310		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C311		ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
C312		ECUX1H270JCV	C.CAPACITOR 50V 27P	1	
C313		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C314		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C315		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C316		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C317		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C318		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C319		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C320		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C321		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C322		ECUX1H333KBV	C.CAPACITOR CH 50V 0.033U	1	
C323		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C325		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C326		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C327		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C328		ECUX1H821JCV	C.CAPACITOR 50V 820P	1	
C329		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C330		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C331		ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C332		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C333		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C334		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C336		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C337		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C338,39		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C340		ECUX1H223ZFV	C.CAPACITOR 50V 0.022U	1	
C341		ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C342		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C381		ECUX1H104ZFV	C.CAPACITOR 50V 0.1U	1	
C801-05		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	5	
C806		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C808		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C811		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C813		ECUX1H181JCV	C.CAPACITOR 50V 180P	1	
C814		ECUX1H270JCV	C.CAPACITOR 50V 27P	1	
C815		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C839		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C840		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C841		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C842		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C843		ECUX1H223ZFV	C.CAPACITOR 50V 0.022U	1	
C844		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C845		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C846		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C847		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C848		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C849		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C850		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C851		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C852		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
C853		ECUX1H180JCV	C.CAPACITOR 50V 18P	1	
C854		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C855		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C856		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C857		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C858		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C859		ECEA1HKAR33	E.CAPACITOR 50V 0.33U	1	
C860		ECUX1H333KBV	C.CAPACITOR CH 50V 0.033U	1	
C861		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C862		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
			DIODES		
D303,04		MA141K	DIODE	2	
D307		1SS283	DIODE	1	
D310		MA141K	DIODE	1	
D381		MA165	DIODE	1	
			DELAYS		
DL802		EFDBR124A53T	DELAY	1	
			INTEGRATED CIRCUITS		
IC301		MSM7403MS	IC	1	
IC302		TDA9715	IC	1	SUPPLIED FROM M.B.V.
			COILS		
L301		VLQEL05S330K	COIL 33UH	1	
L302,03		VLQEL05S390K	COIL 39UH	2	
L304		ELESE101KA	COIL 100UH	1	
L306		VLQEL05S820J	COIL 82UH	1	
L307		ELESE101KA	COIL 100UH	1	
L308		VLQEL05S390K	COIL 39UH	1	
L802		VLQEL05S101K	COIL 100UH	1	
L803		ELESE270KA	COIL 27UH	1	
L805		VLQEL05S150K	COIL 15UH	1	
L808		ELESN6R8JA	COIL 6.8UH	1	
L809-11		ELESE101KA	COIL 100UH	3	
L813		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q301		2SC3930	TRANSISTOR	1	
Q302		2SB1218A	TRANSISTOR	1	
Q802		2SD1819A	TRANSISTOR	1	
Q804		2SC3930	TRANSISTOR	1	
			COMBINATION PARTS		
QR807		UN5213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R301		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R302		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R303,04		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	2	
R305,06		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R307		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R308,09		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R310		ERJ6GEYJ125	M.RESISTOR CH 1/10W 1.2M	1	
R311		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R317		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R319		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R320		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R321		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R322		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R325		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R328		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R329		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R331,32		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R333		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R334,35		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	2	
R337		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R338		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R380		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R382		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R801		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R802		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R803		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R804		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R805		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R809		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R811		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R812		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R813,14		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R826		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R827		ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R835		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R836		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R837		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R838		ERJ6GEYF271	M.RESISTOR CH 1/10W 270	1	
R839		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R840		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R843		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R853		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R855		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R856		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
			VARIABLE RESISTORS		
VR301		EVMEASA00B13	V.RESISTOR	1	
VR302		EVMEASA00B14	V.RESISTOR	1	
VR303,04		EVMEASA00B53	V.RESISTOR	2	
VR305,06		EVMEASA00B14	V.RESISTOR	2	
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
	■	VEP03975J	LUMINANCE & CHROMINANCE		(RTL)NV-SD40E0/EV
			PACK C.B.A.		
			CAPACITORS		
C305		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C306,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C308		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C309		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C310		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C311		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C312		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C313,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C315		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C320		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C801		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C802		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C803,04		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C805		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C807		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C808		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C809		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C812		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C814		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C815		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C816		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C817		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C818		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C819		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C820-25		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C826		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C827		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C828		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C829		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C830		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C831		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C832		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C838		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C839		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C841		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C842		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C843		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C845		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C846		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C849		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
			DIODES		
D302		1SS283	DIODE	1	
D303		MA151A	DIODE	1	
D304		1SS254	DIODE	1	
D801,02		1SS254	DIODE	2	
D804		1SS254	DIODE	1	
			DELAYS		
DL801		VLD0198	DELAY	1	
DL802		EFDUN124A13N	DELAY	1	
			INTEGRATED CIRCUITS		
IC301		VEFH29B	IC	1	
IC802		M52352FP	IC	1	
			COILS		
L303		ELESQ220KA	COIL 22UH	1	
L304		ELESQ101KA	COIL 100UH	1	
L305		ELESP121JA	COIL 120UH	1	
L306		ELESQ390KA	COIL 39UH	1	
L801,02		VLQ0540J150	COIL 15UH	2	
L803		ELESQ220KA	COIL 22UH	1	
L804		ELESQ101KA	COIL 100UH	1	
L805		ELESQ270KA	COIL 27UH	1	
L807,08		VLQ0540J150	COIL 15UH	2	
L809		ELESQ101KA	COIL 100UH	1	
L811,12		ELESQ101KA	COIL 100UH	2	
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q801		MSC2295	TRANSISTOR	1	
Q802		MSD601	TRANSISTOR-RESISTOR	1	
Q808		MSB709	TRANSISTOR	1	
			COMBINATION PARTS		
QR303		MRN2404	TRANSISTOR-RESISTOR	1	
QR306		MRN1404	TRANSISTOR-RESISTOR	1	
QR804		MRN2404	TRANSISTOR-RESISTOR	1	
QR805		MRN1404	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R304		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R307		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R308		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R310		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R312		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R315		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R316		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R318,19		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R322		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R327		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R801		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R802,03		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	2	
R804,05		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R806		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R807		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R813		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R814		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R815		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R816		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R817		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R818		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R819		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R820,21		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	2	
R823,24		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R825		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R827		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R828		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R829		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R830		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R831		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R832		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R833		ERJ6GMYJ204	M.RESISTOR CH 1/10W 200K	1	
R834		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R835		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R836		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R848		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R849		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R850		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R853		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R855		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R856		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R857		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R859		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
			VARIABLE RESISTORS		
VR801,02		EVTEASA00B13	V.RESISTOR	2	
VR803		EVNCBAA00B14	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
	■	VEP03A01FPE	LUMINANCE & CHROMINANCE		(RTL)NV-SD40EO
			PACK C.B.A.		SUPPLIED FROM M.B.V.
			CAPACITORS		
C301		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C302		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C303,04		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C305,06		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	2	
C307		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C308		ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C309		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C310		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C311		ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C312		ECUX1H270JCV	C.CAPACITOR 50V 27P	1	
C313		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C314		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C315		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C316		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C317		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C318		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C319		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C320		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C321		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C322		ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C323		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C325		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C326		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C327		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C328		ECUX1H821JCV	C.CAPACITOR 50V 820P	1	
C329		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C330		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C331		ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C332		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C333		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C334		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C336		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C337		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C338,39		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C340		ECUX1H223ZFV	C.CAPACITOR 50V 0.022U	1	
C341		ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C342		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C381		ECUX1H104ZFV	C.CAPACITOR 50V 0.1U	1	
C801-05		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	5	
C806		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C808		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C811		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C813		ECUX1H181JCV	C.CAPACITOR 50V 180P	1	
C814		ECUX1H270JCV	C.CAPACITOR 50V 27P	1	
C815		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C820		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C821,22		ECUX1H560JCV	C.CAPACITOR 50V 56P	2	
C823,24		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C825		ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C826-31		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	6	
C832		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C833		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C834		ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C835		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C836		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C837		ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C838		ECUX1H331JCV	C.CAPACITOR 50V 330P	1	
C839		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C840		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C841		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C842		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C843		ECUX1H223ZFV	C.CAPACITOR 50V 0.022U	1	
C844		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C845		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C846		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C847		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C848		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C849		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C850		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C851		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C852		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
C853		ECUX1H180JCV	C.CAPACITOR 50V 18P	1	
C854		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C855		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C856		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C857		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C858		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C859		ECEA1HKAR33	E.CAPACITOR 50V 0.33U	1	
C860		ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C861		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C862		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C863		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C864		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C865,66		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			DIODES		
D301		MA141K	DIODE	1	
D303,04		MA141K	DIODE	2	
D307		1SS283	DIODE	1	
D310		MA141K	DIODE	1	
D381		MA165	DIODE	1	
D802		MA141K	DIODE	1	
			DELAYS		
DL801		EFDUN124A13N	DELAY	1	
DL802		EFDWLA13A	DELAY	1	
			INTEGRATED CIRCUITS		
IC301		MSM7403MS	IC	1	
IC302		TDA9715	IC	1	SUPPLIED FROM M.B.V.
IC801		M52352FP	IC	1	
			COILS		
L301		VLQEL05S330K	COIL 33UH	1	
L302,03		VLQEL05S390K	COIL 39UH	2	
L304		ELESE101KA	COIL 100UH	1	
L306		VLQEL05S820J	COIL 82UH	1	
L307		ELESE101KA	COIL 100UH	1	
L308		VLQEL05S390K	COIL 39UH	1	
L802		VLQEL05S101K	COIL 100UH	1	
L803		ELESE270KA	COIL 27UH	1	
L805,06		VLQEL05S150K	COIL 15UH	2	
L807		VLQEL05S101K	COIL 100UH	1	
L808		ELESN6R8JA	COIL 6.8UH	1	
L809-11		ELESE101KA	COIL 100UH	3	
L813		ELESE101KA	COIL 100UH	1	
L814,15		VLQEL05S150K	COIL 15UH	2	
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q301		2SC3930	TRANSISTOR	1	
Q302		2SB1218A	TRANSISTOR	1	
Q802		2SD1819A	TRANSISTOR	1	
Q804,05		2SC3930	TRANSISTOR	2	
Q806		2SD1819A	TRANSISTOR	1	
Q807		2SB1218A	TRANSISTOR	1	
			COMBINATION PARTS		
QR801		UN5213	TRANSISTOR-RESISTOR	1	
QR804		UN5113	TRANSISTOR	1	
QR806		UN5113	TRANSISTOR	1	
QR807		UN5213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R301		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R302		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R303,04		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	2	
R305,06		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R307		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R308,09		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R310		ERJ6GEYJ125	M.RESISTOR CH 1/10W 1.2M	1	
R311		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R312		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R317		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R319		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R320		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R321		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R322		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R325		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R328		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R329		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R331,32		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R333		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R334,35		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	2	
R337		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R338		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R380		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R382		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R801		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R802		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R803		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R804		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R805		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R809		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R811		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R812		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R813,14		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R819,20		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R821		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R822		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R823		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R824,25		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	2	
R826		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R827,28		ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	2	
R829		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R830		ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R832		ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R833		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R834		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R835		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R836		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R837		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R838		ERJ6GEYF271	M.RESISTOR CH 1/10W 270	1	
R839		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R840		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R841		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R843		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R845		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R846		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R847		ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R848		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R849		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R850		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R851		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R852		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R853		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R855		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R856		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
			VARIABLE RESISTORS		
VR301		EVMEASA00B13	V.RESISTOR	1	
VR302		EVMEASA00B14	V.RESISTOR	1	
VR303,04		EVMEASA00B53	V.RESISTOR	2	
VR305,06		EVMEASA00B14	V.RESISTOR	2	
VR801		EVMEASA00B14	V.RESISTOR	1	
VR802,03		EVMEASA00B13	V.RESISTOR	2	
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
	■	VEP07538G	VPS C.B.A.		(RTL)
					NV-SD30EV,SD40EV

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C7801		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C7802		ECQB1H471JZ	P.CAPACITOR 50V 470P	1	
C7803		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C7804		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7805		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C7806		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C7815		VCYE1C104MR1	S.CAPACITOR 16V 0.1U	1	
C7816		ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C7851		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7852		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C7853,54		ECCF1H330JC	C.CAPACITOR 50V 33P	2	
C7855,56		ECEA1HK010	E.CAPACITOR 50V 1U	2	
			DIODES		
D7851		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC7801		SAA4700	IC	1	
IC7851		MN158413VSSY	IC	1	
			CONNECTORS		
PS1		VJS3043B010W	CONNECTOR (FEMALE)	1	
			COMBINATION PARTS		
QR7851		UN6211	TRANSISTOR-RESISTOR	1	
QR7852		UN6213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R7801		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R7802		EROS2CKG7502	M.RESISTOR 1/4W 75K	1	
R7803,04		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R7805		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R7806		EROS2CKG8201	M.RESISTOR 1/4W 8.2K	1	
R7851		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7852		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
			CRYSTAL OSCILLATORS		
X7851		EF0A4R0M03C2	CRYSTAL OSCILLATOR	1	
	■	VEP07726C	TV DEMODULATOR PACK C.B.A.		(RTL)NV-SD30E0/EV
					NV-SD40E0/EV
			CAPACITORS		
C701		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C702		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C703		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C707		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C708		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C717-20		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C721		ECEA1HKR27K	E.CAPACITOR 50V 0.27U	1	
C722		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C723		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C727		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C728		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C730		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C731		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C732		ECQV1H224B0	P.CAPACITOR 50V 0.22U	1	
C734		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C735		ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C736		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C737		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C739		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C740		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C741		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C742		ECUM1H030CCN	C.CAPACITOR CH 50V 3P	1	
C743		ECUM1H270RSN	C.CAPACITOR CH 50V 27P	1	
C744		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C745		ECUM1H680JPN	C.CAPACITOR CH 50V 68P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C749		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C760		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C781		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C782		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C790		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C797,98		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7651		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7653		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C7668		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7685		ECEA1HK010	E.CAPACITOR 50V 1U	1	
			DIODES		
D710		MA3100L	DIODE	1	
D771		MA151WK	DIODE	1	
D772		MA165VT	DIODE	1	
D7672,73		MA3150-H	DIODE	2	
			INTEGRATED CIRCUITS		
IC701		M51366SP-G	IC	1	
			COILS		
L701		ELESQ680KA	COIL 68UH	1	
L711		ELQTR22XB	COIL 0.22UH	1	
L714		VLQ0305J1R2	COIL 1.2UH	1	
L715		VLQ0213K680	COIL 68UH	1	
L716		ELESQ560KA	COIL 56UH	1	
L717,18		ELESQ680KA	COIL 68UH	2	
L719		ELESQ120KA	COIL 12UH	1	
L781		ELESQ680KA	COIL 68UH	1	
			CONNECTORS		
PS701-03		VJS3043B005W	CONNECTOR (FEMALE)	3	
PS704		VJS3043B006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q703		MSD601-S	TRANSISTOR	1	
Q712		2SC1317	TRANSISTOR	1	
Q713		MSD1328-S	TRANSISTOR	1	
Q771		MSD601-S	TRANSISTOR	1	
			COMBINATION PARTS		
QR701,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR711,12		MRN1403	TRANSISTOR-RESISTOR	2	
QR714		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R716		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R717		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R718		ERJ6GEYJ754	M.RESISTOR CH 1/10W 750K	1	
R719,20		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	2	
R721		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R722		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R723		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R724		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R725		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R726		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R727		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R728		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R729,30		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2	
R737		ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R738		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R739		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R740		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R741		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R743		ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R744		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R745		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R746		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R747		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R750		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R757		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R759		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R763		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R764		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R772		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R781		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R782		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R792		ERDS2TJ120	C.RESISTOR 1/4W 12	1	
R795		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7656		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
			TRANSFORMERS		
T703		EIV5EC013A	TRANSFORMER	1	
T704		EIV5EC006A1	TRANSFORMER	1	
T711		EIS5EC004A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR701,02		EVTEASA00B23	V.RESISTOR	2	
VR741		EVNCBAA00B14	V.RESISTOR	1	
VR751		EVNCBAA00B53	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X710		EFCH38MGP1	CRYSTAL OSCILLATOR	1	
X711		VLF0638	CRYSTAL OSCILLATOR	1	
X712		VLF0637	FILTER	1	
X716		EFCV4045A4	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		ENV578B5H6	TUNER	1	<!>
		VSC3242	SHIELD COVER (MAIN)	1	
		VSC3241	SHIELD COVER (TOP)	1	
		VSC2714	SHIELD COVER (BOTTOM)	1	
	■	VEP07726B	TV DEMODULATOR PACK C.B.A.		(RTL)
					NV-SD30EO,SD40EO
					SUPPLIED FROM M.B.V.
			CAPACITORS		
C701		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C702		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C703		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C707		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C708		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C717-20		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C721		ECEA1HKR27K	E.CAPACITOR 50V 0.27U	1	
C722		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C727		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C728		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C730		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C731		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C732		ECQV1H224B0	P.CAPACITOR 50V 0.22U	1	
C734		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C735		ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C736		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C737		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C739		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C740		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C741		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C742		ECUM1H030CCN	C.CAPACITOR CH 50V 3P	1	
C743		ECUM1H270RCN	C.CAPACITOR CH 50V 27P	1	
C744		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C745		ECUM1H680JPN	C.CAPACITOR CH 50V 68P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C749		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C760		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C782		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C790		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C797,98		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7651		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7653		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C7668		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7685		ECEA1HK010	E.CAPACITOR 50V 1U	1	
			DIODES		
D710		MA3100L	DIODE	1	
D771		MA151WK	DIODE	1	
D772		MA165VT	DIODE	1	
D7672,73		MA3150-H	DIODE	2	
			INTEGRATED CIRCUITS		
IC701		M51366SP-G	IC	1	SUPPLIED FROM M.B.V.
			COILS		
L701		ELESQ680KA	COIL 68UH	1	
L711		ELQTR22XB	COIL 0.22UH	1	
L714		VLQ0305J1R2	COIL 1.2UH	1	
L716		ELESQ560KA	COIL 56UH	1	
L717,18		ELESQ680KA	COIL 68UH	2	
L719		ELESQ120KA	COIL 12UH	1	
			CONNECTORS		
PS701-03		VJS3043B005W	CONNECTOR (FEMALE)	3	
PS704		VJS3043B006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q703		MSD601-S	TRANSISTOR	1	
Q712		2SC1317	TRANSISTOR	1	
Q713		MSD1328-S	TRANSISTOR	1	
Q771		MSD601-S	TRANSISTOR	1	
			COMBINATION PARTS		
QR701,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR711,12		MRN1403	TRANSISTOR-RESISTOR	2	
QR714		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R716		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R717		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R718		ERJ6GEYJ754	M.RESISTOR CH 1/10W 750K	1	
R719,20		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	2	
R721		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R722		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R723		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R724		ERDS2TJ101	C.RESISTOR 1/4W 100	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R725		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R726		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R727		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R728		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R729,30		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2	
R737		ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R738		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R739		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R740		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R741		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R743		ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R744		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R745		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R746		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R747		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R750		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R757		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R759		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R763		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R764		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R772		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R792		ERDS2TJ120	C.RESISTOR 1/4W 12	1	
R795		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7656		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
			TRANSFORMERS		
T703		EIV5EC013A	TRANSFORMER	1	
T704		EIV5EC006A1	TRANSFORMER	1	
T711		EIS5EC004A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR701,02		EVTEASA00B23	V.RESISTOR	2	
VR751		EVNCBAA00B53	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X710		VLF1035	CRYSTAL OSCILLATOR	1	
X711		VLF0638	CRYSTAL OSCILLATOR	1	
X712		VLF0637	FILTER	1	
X716		EFCV4045A4	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		ENV578B5H6	TUNER	1	<!>
		VSC3242	SHIELD COVER (MAIN)	1	
		VSC3241	SHIELD COVER (TOP)	1	
		VSC2714	SHIELD COVER (BOTTOM)	1	
	■	VEP05180B	HEAD AMP C.B.A.		(RTL)NV-SD30EO/EV
			CAPACITORS		
C501		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C503		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C504		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C505		ECUM1H620JCN	C.CAPACITOR 50V 62P	1	
C507		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C508		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C511		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C512		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C513,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C516,17		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C518		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C519		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C520		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C521,22		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C523		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C524		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C525		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C526,27		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C528,29		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C530,31		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C532		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C535-38		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	4	
			INTEGRATED CIRCUITS		
IC501		AN3336SB	IC	1	
			COILS		
L501		ELESQ101KA	COIL 100UH	1	
L502		ELESQ151KA	COIL 150UH	1	
L503		ELESQ820KA	COIL 82UH	1	
L504		ELESQ270JA	COIL 27UH	1	
L505		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
P501		VJS1680	CONNECTOR (FEMALE)	1	
P502		VJS3069T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q502		MSB709	TRANSISTOR	1	
Q503		MSC2295	TRANSISTOR	1	
			RESISTORS		
R501		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R502		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R503		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R505		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R506		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R507		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R508,09		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R510		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R513		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R515		ERJ6GMYG752	M.RESISTOR CH 1/10W 7.5K	1	
R516		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R517		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R518		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R521		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R522		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R523-26		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	4	
R527		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
			VARIABLE RESISTORS		
VR501		EVND6AA00B23	V.RESISTOR 2K	1	
VR502		EVND6AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		
		VSC3770	SHIELD COVER (BOTTOM)	1	
		VSC3768	SHIELD COVER (TOP)	1	
		VSC3304	SHIELD COVER (MAIN)	1	
	■	VEP05182APE	HEAD AMP C.B.A.		(RTL)NV-SD30EO
					SUPPLIED FROM M.B.V.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C503		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C505		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C508		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C509		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C510		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C511		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C512		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C513		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C514		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C516		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C517		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C518		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C519		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C520		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C528		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C529		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C530		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C533		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C534,35		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	2	
C536,37		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C540		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C541		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C542,43		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	2	
			DIODES		
D501,02		1SS254	DIODE	2	
D504		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC501		TEA5705	IC	1	SUPPLIED FROM M.B.V.
			COILS		
L501		ELESN820KA	COIL 82UH	1	
L506		ELESE151K	COIL 150UH	1	
L508		ELESE101KA	COIL 100UH	1	
L509		ELESE270KA	COIL 27UH	1	
L510		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
P501		VJS1680	CONNECTOR (FEMALE)	1	
PS002		VJS3069T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q502		2SB709	TRANSISTOR CHIP	1	
Q503		2SC2295	TRANSISTOR	1	
Q504		2SB709	TRANSISTOR CHIP	1	
			RESISTORS		
R505		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R507		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R509		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R510		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R512		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R513		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R514,15		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R516		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R517		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R518		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R519		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R520		ERJ6GEYJ180	M.RESISTOR CH 1/10W 18	1	
R521		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R523,24		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R525		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R526		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R527		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R528		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R529		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R530,31		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R533		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R534		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R535		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R536		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R537		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R541		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
			VARIABLE RESISTORS		
VR501		EVNDCAA03B23	V.RESISTOR	1	
VR502		EVNDCAA03B13	V.RESISTOR	1	
			MISCELLANEOUS		
		VSC3768	SHIELD COVER (TOP)	1	
		VSC3769	SHIELD COVER (MAIN)	1	
		VSC3770	SHIELD COVER (BOTTOM)	1	
	■	VEP05180A	HEAD AMP C.B.A.		(RTL)NV-SD40E0/EV
			CAPACITORS		
C501		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C503		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C504		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C505		ECUM1H620JCN	C.CAPACITOR 50V 62P	1	
C507		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C508		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C511		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C512		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C513,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C516,17		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C518		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C519		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C520		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C521,22		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C523		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C524		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C525		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C526,27		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C528,29		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C530,31		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C532		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C535-38		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	4	
			INTEGRATED CIRCUITS		
IC501		AN3336SB	IC	1	
			COILS		
L501		ELESQ101KA	COIL 100UH	1	
L502		ELESQ151KA	COIL 150UH	1	
L503		ELESQ820KA	COIL 82UH	1	
L504		ELESQ270JA	COIL 27UH	1	
L505		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
P501		VJS1684	CONNECTOR (FEMALE)	1	
P502		VJS3069T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q502		MSB709	TRANSISTOR	1	
Q503		MSC2295	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COMBINATION PARTS		
QR501		IMH6	TRANSISTOR	1	
QR502		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R501		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R502		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R503		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R505		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R506		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R507		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R508,09		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R510		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R513		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R515		ERJ6GMYG752	M.RESISTOR CH 1/10W 7.5K	1	
R516		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R517		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R518		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R519		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R520		ERJ6GMYJ274	M.RESISTOR CH 1/10W 270K	1	
R521		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R522		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R523-26		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	4	
R527		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R528		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R530		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
			VARIABLE RESISTORS		
VR501		EVND6AA00B23	V.RESISTOR 2K	1	
VR502		EVND6AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		
		VSC3768	SHIELD COVER (BOTTOM)	1	
		VSC3769	SHIELD COVER (TOP)	1	
		VSC3770	SHIELD COVER (MAIN)	1	
	■	VEP05182BPE	HEAD AMP C.B.A.		(RTL)NV-SD40E0
					SUPPLIED FROM M.B.V.
			CAPACITORS		
C503		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C505		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C508		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C509		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C510		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C511		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C512		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C513		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C514		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C515,16		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C517		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C518		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C519		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C520,21		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C528		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C529		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C530		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C533		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C534,35		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	2	
C536,37		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C540		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C541		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C542,43		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			DIODES		
D501-04		1SS254	DIODE	4	
			INTEGRATED CIRCUITS		
IC501		TEA5705	IC	1	SUPPLIED FROM M.B.V.
			COILS		
L501		ELESN820KA	COIL 82UH	1	
L506		ELESE151K	COIL 150UH	1	
L508		ELESE101KA	COIL 100UH	1	
L509		ELESE270KA	COIL 27UH	1	
L510		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
P501		VJS1684	CONNECTOR (FEMALE)	1	
PS002		VJS3069T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q502		2SB709	TRANSISTOR CHIP	1	
Q503		2SC2295	TRANSISTOR	1	
Q504		2SB709	TRANSISTOR CHIP	1	
			COMBINATION PARTS		
QR502		UN2212	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R505		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R507		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R509		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R510		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R512		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R513		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R514,15		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R516		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R517		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R518		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R519		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R520		ERJ6GEYJ180	M.RESISTOR CH 1/10W 18	1	
R521		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R522		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R523,24		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R525		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R526		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R527		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R528		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R529		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R530,31		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R533		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R534		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R535		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R536		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R537		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R539,40		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	2	
R541		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
			VARIABLE RESISTORS		
VR501		EVNDCAA03B23	V.RESISTOR	1	
VR502		EVNDCAA03B13	V.RESISTOR	1	
			MISCELLANEOUS		
		VSC3768	SHIELD COVER (TOP)	1	
		VSC3769	SHIELD COVER (MAIN)	1	
		VSC3770	SHIELD COVER (BOTTOM)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP07701G	TIMER C.B.A.		(RTL)NV-SD30EO
			CAPACITORS		
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509,10		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
			DIODES		
D7501		MA3160	DIODE	1	
D7504-06		MA221	DIODE	3	
D7508		MA221	DIODE	1	
D7510		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7520		MA221	DIODE	1	
D7522		MA221	DIODE	1	
D7525		MA221	DIODE	1	
D7527		MA221	DIODE	1	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541,42		MA221	DIODE	2	
D7546-49		LN376GCPXU	DIODE	4	
D7550		SEL2913KTP3	DIODE	1	
D7552,53		SEL2913KTP3	DIODE	2	
D7554-57		MA221	DIODE	4	
D7560		MA221	DIODE	1	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSV	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		XLJ9021B	IC	1	
IR7501		VEK6407	IR RECEIVER UNIT	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B013A	CONNECTOR (FEMALE)	1	
P7502		VJS1679	CONNECTOR (FEMALE) 9P	1	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R7501		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518-20		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R7541		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7551-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	5	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
			SWITCHES		
SW7501-03		EVQ11409K	SWITCH	3	
SW7506-11		EVQ11409K	SWITCH	6	
SW7513-16		EVQ11409K	SWITCH	4	
SW7522,23		EVQ11409K	SWITCH	2	
			VARIABLE RESISTORS		
VR7501		EVUF3AF15B24	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0484	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VGU6099	FIP HOLDER	1	
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VMD2061	SHUTTLE HOLDER	1	
		VSQ0815	SHUTTLE ENCODER	1	
	■	VEP07701J	TIMER C.B.A.		(RTL)NV-SD30EV
			CAPACITORS		
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509,10		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
			DIODES		
D7501		MA3160	DIODE	1	
D7504-06		MA221	DIODE	3	
D7508		MA221	DIODE	1	
D7510		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7520		MA221	DIODE	1	
D7522		MA221	DIODE	1	
D7525		MA221	DIODE	1	
D7527		MA221	DIODE	1	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541,42		MA221	DIODE	2	
D7546-49		LN376GCPXU	DIODE	4	
D7550		SEL2913KTP3	DIODE	1	
D7552,53		SEL2913KTP3	DIODE	2	
D7554-57		MA221	DIODE	4	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSV	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		XLJ9021B	IC	1	
IR7501		VEK6407	IR RECEIVER UNIT	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B013A	CONNECTOR (FEMALE)	1	
P7502		VJS1679	CONNECTOR (FEMALE) 9P	1	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R7501		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518-20		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R7541		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7551-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	5	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
			SWITCHES		
SW7501-03		EVQ11409K	SWITCH	3	
SW7506-11		EVQ11409K	SWITCH	6	
SW7513-16		EVQ11409K	SWITCH	4	
SW7522,23		EVQ11409K	SWITCH	2	
			VARIABLE RESISTORS		
VR7501		EVUF3AF15B24	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0484	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VGU6099	FIP HOLDER	1	
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VMD2061	SHUTTLE HOLDER	1	
		VSQ0815	SHUTTLE ENCODER	1	
	■	VEP07699G	TIMER C.B.A.		(RTL)NV-SD40EO
			CAPACITORS		
C4801		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4802		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4804		ECUM1E124ZFN	C.CAPACITOR CH 25V 0.12U	1	
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509,10		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7518		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7519		ECEA1CK101	E.CAPACITOR 16V 100U	1	
			DIODES		
D7501		MA3220	DIODE	1	
D7504-06		MA221	DIODE	3	
D7508		MA221	DIODE	1	
D7510		MA221	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D7512		MA221	DIODE	1	
D7516,17		MA221	DIODE	2	
D7520		MA221	DIODE	1	
D7522		MA221	DIODE	1	
D7525-27		MA221	DIODE	3	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541,42		MA221	DIODE	2	
D7546-49		LN376GCPXU	DIODE	4	
D7550-53		SEL2913KTP3	DIODE	4	
D7554-57		MA221	DIODE	4	
D7560		MA221	DIODE	1	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSV	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		XLJ9021B	IC	1	
IR7501		VEK6407	IR RECEIVER UNIT	1	
			JACKS		
J4801		VJJ0281	MIC JACK	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B013A	CONNECTOR (FEMALE)	1	
P7502		VJS3193B015A	CONNECTOR (FEMALE)	1	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
PP7501		VJP3042A004W	CONNECTOR (MALE)	1	
PP7502		VJS3404A005A	CONNECTOR (FEMALE)	1	
PS4801		VJS3042B004W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q4801		2SA1034	TRANSISTOR	1	
Q4802		2SC2405	TRANSISTOR	1	
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R4801		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4802		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4803		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4804		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4805		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4806		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4807		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4808		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7501		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518-20		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540,41		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7551-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	5	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7562		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
			SWITCHES		
SW7501-11		EVQ11409K	SWITCH	11	
SW7513-16		EVQ11409K	SWITCH	4	
			VARIABLE RESISTORS		
VR7501		EVUF3AF15B24	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0484	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VGU6099	FIP HOLDER	1	
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VMD2035	JOG SHUTTLE HOLDER	1	
		VSQ0811	JOG SHUTTLE ENCODER	1	
	■	VEP07699J	TIMER C.B.A.		(RTL)NV-SD40EO
			CAPACITORS		
C4801		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4802		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4804		ECUM1E124ZFN	C.CAPACITOR CH 25V 0.12U	1	
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509,10		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7518		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7519		ECEA1CK101	E.CAPACITOR 16V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			DIODES		
D7501		MA3220	DIODE	1	
D7504-06		MA221	DIODE	3	
D7508		MA221	DIODE	1	
D7510		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7516,17		MA221	DIODE	2	
D7520		MA221	DIODE	1	
D7522		MA221	DIODE	1	
D7525-27		MA221	DIODE	3	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541,42		MA221	DIODE	2	
D7546-49		LN376GCPXU	DIODE	4	
D7550-53		SEL2913KTP3	DIODE	4	
D7554-57		MA221	DIODE	4	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSV	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		XLJ9021B	IC	1	
IR7501		VEK6407	IR RECEIVER UNIT	1	
			JACKS		
J4801		VJJ0281	MIC JACK	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B013A	CONNECTOR (FEMALE)	1	
P7502		VJS3193B015A	CONNECTOR (FEMALE)	1	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
PP7501		VJP3042A004W	CONNECTOR (MALE)	1	
PP7502		VJS3404A005A	CONNECTOR (FEMALE)	1	
PS4801		VJS3042B004W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q4801		2SA1034	TRANSISTOR	1	
Q4802		2SC2405	TRANSISTOR	1	
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R4801		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4802		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4803		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4804		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4805		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4806		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4807		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4808		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7501		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518-20		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540,41		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7551-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	5	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7562		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
			SWITCHES		
SW7501-11		EVQ11409K	SWITCH	11	
SW7513-16		EVQ11409K	SWITCH	4	
			VARIABLE RESISTORS		
VR7501		EVUF3AF15B24	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0484	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VGU6099	FIP HOLDER	1	
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VMD2035	JOG SHUTTLE HOLDER	1	
		VSQ0811	JOG SHUTTLE ENCODER	1	
	■	VEP07716A	OPERATION C.B.A.		(RTL)NV-SD40EO/EV
			CONNECTORS		
PP6601		VJP3404A005W	CONNECTOR (MALE)	1	
			SWITCHES		
SW6601,02		EVQ11409K	SWITCH	2	
	■	VEP01518J	POWER C.B.A.		(RTL)<!>
					NV-SD30EO,SD40EO

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C1101		VCC0024	C.CAPACITOR 2200P	1	<!>
C1102-05		VCK0046	CAPACITOR	4	<!>
C1106		VCC0024	C.CAPACITOR 2200P	1	<!>
C1107		ECQU2A224MN	P.CAPACITOR 250V 0.22U	1	<!>
C1108		ECQU2A154MNB	P.CAPACITOR 250V 0.15U	1	<!>
C1109		ECEC2GG330	CAPACITOR	1	
C1110		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C1111		ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
C1112,13		VCK0046	CAPACITOR	2	<!>
C1114		VCC0024	C.CAPACITOR 2200P	1	<!>
C1115		ECQE6473KF	P.CAPACITOR 50V	1	
C1116		VCK0106K221	CAPACITOR	1	
C1117		ECQB1H123JF	P.CAPACITOR 50V 0.012U	1	
C1118		ECEA1JFE470	E.CAPACITOR 63V 47U	1	
C1119		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1120,21		ECEA1DFZ681	E.CAPACITOR 20V 680U	2	
C1122		ECEA1VFE820	E.CAPACITOR 35V 82U	1	
C1123		ECEA1DFZ331	E.CAPACITOR 20V 330U	1	
C1124,25		ECEA1AFZ331X	E.CAPACITOR 10V 330U	2	
C1126		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C1127		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1128		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1129		ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C1130		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1131		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1133		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1134-39		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	6	
			DIODES		
D1101		S1WBA60S	DIODE	1	<!>
D1102		1SS254	DIODE	1	
D1103		VSD0002	DIODE	1	<!>
D1104		AP01C	DIODE	1	
D1105		1SS254	DIODE	1	
D1106,07		MA178	DIODE	2	
D1108		MA4024-H	DIODE	1	
D1109		AU01Z	DIODE	1	
D1110		RL2Z	DIODE	1	
D1111		MA185	DIODE	1	
D1112,13		11EQS04	DIODE	2	
D1114,15		MA178	DIODE	2	
D1117		MA2200B	DIODE	1	
D1118		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC1101		TL431CLP	IC	1	
			COILS		
L1101		ELF18D221F	COIL 220UH	1	<!>
L1107		ELF18D290A	COIL 29UH	1	<!>
L1108		VLQ0410	COIL	1	
L1109		VLQ0579	COIL	1	
L1110		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
P1101		VJS2625	CONNECTOR (FEMALE)	1	<!>
P1102		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1101		2SC4300	TRANSISTOR	1	<!>
Q1102		2SD2259	TRANSISTOR	1	
Q1103		PS2561L1-1	TRANSISTOR-PHOTO COUPLER	1	<!>
Q1105		2SD1991	TRANSISTOR	1	
Q1106		2SD2375	TRANSISTOR	1	
Q1108		2SD2259	TRANSISTOR	1	
Q1109		2SD1996	TRANSISTOR	1	
			RESISTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1101		ERC12AGM334	S.RESISTOR 1/2W 330K	1	<!>
R1102		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1103		ERG2SJ680	M.RESISTOR 2W 68	1	
R1104		ERX1SJ1R2	M.RESISTOR 1W 1.2	1	
R1105		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1106		ERF2TK2R2	W.RESISTOR 2.2	1	
R1107		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1108		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1109		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1110		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1111,12		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	2	
R1113		EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1114		ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R1115		ERDS2FJ820	C.RESISTOR 1/4W 82	1	
R1118		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1119		EROS2CKG2401	M.RESISTOR 1/4W 2.4K	1	
R1120		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1121		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1122,23		ERDS2FJ474	C.RESISTOR 1/4W 470K	2	
R1124		ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1125		ERDS2FJ104	C.RESISTOR 1/4W 100K	1	
			TRANSFORMERS		
T1101		VLT0699	TRANSFORMER	1	<!>
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	2	<!>
	■	VEP01518K	POWER C.B.A.		(RTL)<!>
					NV-SD30EV,SD40EV
			CAPACITORS		
C1101		VCC0021	C.CAPACITOR	1	<!>
C1106		VCC0021	C.CAPACITOR	1	<!>
C1107		ECQU2A154MNB	P.CAPACITOR 250V 0.15U	1	<!>
C1108		ECQU2A104MN	P.CAPACITOR 250V 0.01U	1	<!>
C1109		ECEC2GG330	CAPACITOR	1	
C1110		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C1111		ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
C1114		VCC0022	C.CAPACITOR 1000P	1	<!>
C1115		ECQE6473KF	P.CAPACITOR 50V	1	
C1116		VCK0106K221	CAPACITOR	1	
C1117		ECQB1H123JF	P.CAPACITOR 50V 0.012U	1	
C1118		ECEA1JFE470	E.CAPACITOR 63V 47U	1	
C1119		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1120,21		ECEA1DFZ681	E.CAPACITOR 20V 680U	2	
C1122		ECEA1VFE820	E.CAPACITOR 35V 82U	1	
C1123		ECEA1DFZ331	E.CAPACITOR 20V 330U	1	
C1124,25		ECEA1AFZ331X	E.CAPACITOR 10V 330U	2	
C1126		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C1127		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1128		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1129		ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C1130		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1131		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1133		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1134-39		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	6	
			DIODES		
D1101		S1WBA60S	DIODE	1	<!>
D1102		1SS254	DIODE	1	
D1103		VSD0002	DIODE	1	<!>
D1104		AP01C	DIODE	1	
D1105		1SS254	DIODE	1	
D1106,07		MA178	DIODE	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D1108		MA4024-H	DIODE	1	
D1109		AU01Z	DIODE	1	
D1110		RL2Z	DIODE	1	
D1111		MA185	DIODE	1	
D1112,13		11EQS04	DIODE	2	
D1114,15		MA178	DIODE	2	
D1117		MA2200B	DIODE	1	
D1118		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC1101		TL431CLP	IC	1	
			COILS		
L1101		ELF18D221F	COIL 220UH	1	<!>
L1107		ELF18D290A	COIL 29UH	1	<!>
L1108		VLQ0410	COIL	1	
L1109		VLQ0579	COIL	1	
L1110		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
P1101		VJS2625	CONNECTOR (FEMALE)	1	<!>
P1102		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1101		2SC4300	TRANSISTOR	1	<!>
Q1102		2SD2259	TRANSISTOR	1	
Q1103		PS2561L1-1	TRANSISTOR-PHOTO COUPLER	1	<!>
Q1105		2SD1991	TRANSISTOR	1	
Q1106		2SD2375	TRANSISTOR	1	
Q1108		2SD2259	TRANSISTOR	1	
Q1109		2SD1996	TRANSISTOR	1	
			RESISTORS		
R1101		ERC12AGM334	S.RESISTOR 1/2W 330K	1	<!>
R1102		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1103		ERG2SJ680	M.RESISTOR 2W 68	1	
R1104		ERX1SJ1R2	M.RESISTOR 1W 1.2	1	
R1105		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1106		ERF2TK2R2	W.RESISTOR 2.2	1	
R1107		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1108		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1109		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1110		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1111,12		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	2	
R1113		EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1114		ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R1115		ERDS2FJ820	C.RESISTOR 1/4W 82	1	
R1118		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1119		EROS2CKG2401	M.RESISTOR 1/4W 2.4K	1	
R1120		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1121		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1122,23		ERDS2FJ474	C.RESISTOR 1/4W 470K	2	
R1124		ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1125		ERDS2FJ104	C.RESISTOR 1/4W 100K	1	
			TRANSFORMERS		
T1101		VLT0699	TRANSFORMER	1	<!>
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	2	<!>
		VMZ1184	CAPACITOR COVER (B)	3	<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	---------	MECHANISM CONNECTION C.B.A.		(RTL)
			DIODES		
D1501		LN59L.VT	DIODE	1	
			INTEGRATED CIRCUITS		
IC1501,02		ON1387	IC	2	
			CONNECTORS		
P1503		VJS3316A002	CONNECTOR (FEMALE)	1	
P1504		VJS3317A004	CONNECTOR (FEMALE)	1	
P1505		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1501,02		PN205L-NC.VT	TRANSISTOR	2	
			SWITCHES		
SW1501		VES0695	SAFETY SWITCH	1	
			MISCELLANEOUS		
		VMD2029	REEL GUIDE	1	
	■	VEP00S86A	POEWR TRANSISTOR C.B.A.		(RTL)
			CONNECTORS		
P1506		VJP1230T	CONNECTOR (MALE) 3P	1	
			TRANSISTORS		
Q1503		2SB941QBB	TRANSISTOR	1	
	■	---------	MOTOR C.B.A.		(RTL)
			MISCELLANEOUS		
		VJP3316B002	CONNECTOR (MALE)	1	

Order No. VRD9403S003

Service Manual

Video Product

Model No. Mentioned below

Supplement

Effective from: Running Change

Subject: DD Cylinder Unit Standardization

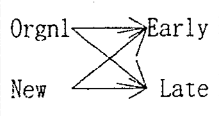
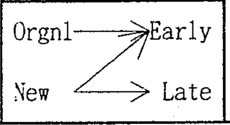
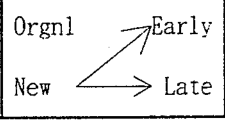
Please use this manual together with the Service Manual for Order No. Mentioned below
Model No. Mentioned below

1) Model No. (Service Manual Order No.)

NV-SD30EG/B, SD40EG/B (VRD9302M108), V10577
NV-SD30EO/EV, SD40EO/EV (VRD9303M112), V00983
NV-SD30BI, SD40BI (VRD9305M120),
NV-SD12BA (VRD9301M101),
NV-SD32F, SD42F (VRD9309M137),
NV-SD10A/EA/AM, SD20A/EA, SD25AM (VRD9210M156) V00939
NV-SD10EE (VRD9303M113) V10475
NV-SD20EE (VRD9301M102) V00927
NV-SD31EP, SD41EP (VRD9305M119)
NV-SD50MC (VRD9305M123C)
NV-SD30EO (S) (VRD9309M139)

2) Parts List

INTERCHANGEABLITY CODE See the I/C column on the following Part Number list

A	Parts Orgnl New	Prdctn Early Late	
B	Parts Orgnl New	Prdctn Early Late	
C	Parts Orgnl New	Prdctn Early Late	
D	Parts Orgnl New	Prdctn ⟶ Early ⟶ Late	
E	Addition		
F	Deletion		
G	Other		

Parts Number List

Ref. No.	Original Part NO.	New Part No.	Part Name & Description	I/C	Remarks
70(1) 71(1)	VEG1023 VEH0598	VEG1138 VEH0656	CYLINDER UNIT UPPER CYLINDER UNIT	A A	NV-SD40 Series NV-SD20 Series NV-SD41EP NV-SD25AM NV-SD50MC
70(1) 71(1)	VEG1024 VEH0599	VEG1139 VEH0657	CYLINDER UNIT UPPER CYLINDER UNIT	A A	NV-SD30 Series NV-SD10 Series NV-SD31EP NV-SD12BA NV-SD32F
70(1) 71(1)	VEG1052 VEH0613	VEG1140 VEH0658	CYLINDER UNIT UPPER CYLINDER UNIT	A A	NV-SD42F [SUPPLIED FROM PFS]

Panasonic

INTERNAL REFERENCE CODES

NOTE: This chart is only for internal reference.
Do not order any parts according to these codes.

P. C. B.	FILM CODE
MAIN	HOTM02-03971
TIMER(NV-SD30)	HOTM02-07701
TIMER(NV-SD40)	HOTM02-07699
POWER	HOTM03-01518
INPUT & OUTPUT	HOTM00-03973
TV DEMODULATOR	HOTM00-07726
HEAD AMP	HOTM01-05180
HEAD AMP (NV-SD30/SD40EO FROM MBV)	HOTM00-05182
LUMINANCE & CHROMINANCE	HOTM00-03975
LUMINANCE & CHROMINANCE (NV-SD30/SD40EO FROM MBV)	HOTM01-03A01
OPERATION(NV-SD40)	HOTM00-07716
MIC JACK(NV-SD40)	HOTM00-00S77
VPS(NV-SD30/SD40EV)	HOTM02-07538
POWER TRANSISTOR	HOTM00-00S86
MECHANISM CONNECTION	HOTM01-00S63
LOADING MOTOR	HOTM00-00S75